Department SERH 1986-04-14

REPORT 86.88 (APS 5) Pr.nr. 505.0720

Subject: Application of decision criteria
based on "Adequate peaks" for
identification of anabolics
in real samples.

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8688

STATE INSTITUTE FOR QUALITY CONTROL OF AGRICULTURAL PRODUCTS (RIKILT)
Wageningen, The Netherlands

Department of Spectroscopy/Electrochemistry/Radio activity and Hormones

1986-04-14

REPORT 86.88 (APS 5) Pr.nr. 505.0720

Project: Development of spectroscopic methods of analysis.

Subject: Application of decision criteria based on "Adequate peaks" for identification of anabolics in real samples. (APS series, part 5).

Preceeding reports: 86.47 (APS 1), 86.48 (APS 2), 86.49 (APS 3) and 86.87 (APS 4).

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Aim

Demonstration of the applicability of a new approach for identification of chemical compounds in real samples by infrared spectroscopy.

Summary

Infrared spectra of real samples suspected to contain anabolics were made, using a Bruker IFS-85 FTIR spectrometer and a Barnes diffuse reflection attachment.
Identification of compounds is performed with the help of so-called "Adequate Peaks Tables". Therefore a library of adequate peak table files of anabolics and related compounds was set up (see APS 3, RIKILT Report 86.49). The selection of the adequate peaks is carried out according to objective criteria (see APS 2, RIKILT Report 86.48).
The presence of a compound in a sample is proved by searching to what extent the adequate peaks of that compound are present in the spectrum of the sample. This search is also carried out according to objective criteria.
The method is applied to a number of injection solutions (cases 1-6) or implantation sites found in cows, and suspected to be application sites of anabolics (cases 7-18).
However, the method is not restricted to this kind of compounds and samples.

Conclusion

The method described offers a new and efficient approach for unambiguous identification of chemical compounds in real samples, by objective, digitalized criteria.

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Collaborators : Dr W.G. de Ruig, J.M. Weseman, H.J. Korbee, CL-RVV
Project leader: J.M. Weseman

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1. CASES 1-6

Six samples of solutions, suspected to be injection solutions for illegal administration of anabolics for cattle, have been analysed. By a method consisting of extraction, HPLC separation and purification, followed by bi-dimensional HPTLC separation, purification and detection, the presence of medroxyprogesterone acetate (MPA) was detected.
This had to be confirmed by infrared spectrometry.

Procedure

0.5 ml of injection solution was mixed with 5 ml of hexane. The analyte was extracted 5 times with 1 ml of acetonitrile. The collected acetonitrile extracts were evaporated to dryness under a stream of nitrogen. The residue was dissolved in 400 µl methanol/water (60:40 v/v), filtered over a membrane filter and chromatographed by HPLC.

Chromatographic conditions

The HPLC-column, Hypersil ODS with the length of 15 cm and a diameter of 4.5 mm, was used for cleaning the extract.
Gradient-elution was used.

Injection volume

The fraction with retention time characteristic for medroxyprogesterone acetate, as determined by a medroxyprogesterone acetate reference solution, was collected and evaporated to dryness under a nitrogen stream.

IR procedure

The residue is redissolved in some methanol and transferred into a few milligrams of potassium bromide. After drying, the mixture is ground and transferred into a sample microcup of the Barnes diffuse reflection apparatus.

Infrared conditions

Bruker IFS-85 Fourier Transform Infrared Spectrometer.
Barnes diffuse reflection attachment.
Resolution: 2 $cm^{-1}$.

Number of scans: 100.

Reference spectrum: KBr under the same recording conditions.

The "double beam" spectrum was corrected for water vapour.

No background correction was performed.

The sample spectra (case 1-6) and the reference spectrum of medroxy-progesterone acetate are presented in the Annex.

Results

IR investigation, using the "Adequate Peak Search", confirmed the presence of medroxyprogesteron acetate in all cases, see Table 1. The complete search data, from which Table 1 is taken, are reported in the Annex. In the listings the best score is indicated by --● and the second best score by --● ●.

The presence of MPA is confirmed in all cases.

Table 1. Score list of the Adequate Peaks Search for 6 samples of injection solutions.

| Case | Filename | Best score = MPA | Second best score |
|---|---|---|---|
| 1 | MON 42073 | 100 | 45 |
| 2 | MON 42093 | 90 | 37 |
| 3 | MON 42095 | 100 | 42 |
| 4 | MON 42096 | 100 | 40 |
| 5 | MON 42097 | 100 | 42 |
| 6 | MON 42098 | 100 | 40 |

2. CASES 7-15

In the slaughter-house administration sites were found in the neck musculature of 9 cows. Implants, consisting of small tablets, proved to be present.

The samples were investigated by IR, and confirmation of the presence of anabolics, using the criteria based upon adequate peaks, was performed.

Procedure

One tablet was isolated out of the site of implantation. It was cleaned by rinsing with hexane. Then the tablet was ground and extracted with diethylether.

The ether was evaporated, and the residue was redissolved in methanol/water (60/40 V/V). A part of the solution was chromatographed by HPLC, and a fraction in which the anabolic esters are expected, was isolated. After evaporation of the solvent, the residue was dissolved in 100 µl methanol and transferred into a few milligrams of potassium bromide. The methanol was evaporated and the mixture was ground and then transferred into a sample cup of the Barnes diffuse reflection attachment. An infrared spectrum was recorded as described for cases 1-6.
The spectra of the 9 samples were investigated using the "Adequate Peaks Search" method. The spectra and the search reports are presented in the Annex.
Again, in these listings the best score is marked by --●, and the second best score by --●●.

Results

In Table 2 some data from the Adequate Peaks Search data, relevant here, are collected.
A first screening test by HPLC/HPTLC had given the impression that medroxyprogesterone acetate (MPA) was present. This was, however, not confirmed by IR. Neither did related compounds as megestrol acetate (MGA) and melengestrol acetate (MGLA).
Further HPLC/HPTLC analysis pointed out that trenbolone acetate (TBA) should be present. IR investigation, using the "Adequate Peaks Search", confirmed this conclusion in all cases, see Table 2.
For all samples the presence of TBA was also confirmed by GC-MS.

Table 2. Score list of the Adequate Peaks Search for 10 samples of implanted tablets.

| Case | Filename | Score TBA | Second score | Score MPA | Score MGA | Score MGLA |
|---|---|---|---|---|---|---|
| 7 | MON 42123 | 80 | 30 | 0 | 9 | 21 |
| 8 | MON 42124 | 90 | 28 | 0 | 9 | 26 |
| 9 | MON 42125 | 70 | 27 | 0 | 9 | 21 |
| 10 | MON 42126 | 100 | 38 | 18 | 18 | 30 |
| 11 | MON 42127 | 70 | 33 | 9 | 13 | 13 |
| 12 | MON 42128 | 80 | 28 | 9 | 9 | 26 |
| 13 | MON 42129 | 80 | 26 | 0 | 9 | 26 |
| 14 | MON 42130 | 50 | 42 | 9 | 13 | 21 |
| 15 | MON 42144 | 80 | 30 | 9 | 9 | 8 |

The infrared spectra of the samples (case 7-15) and the reference spectra of MPA, MGA, MGLA and TBA are presented in the complete Adequate Peaks Searches.

3. CASES 16-18

Three samples of meat, suspected to be administration sites of illegal anabolics, were sampled by the veterinarian authorities. From the samples the suspected administration sites were isolated and analysed by a standard procedure, based upon HPLC separation and UV detection, followed by HPTLC separation and detection of relevant fractions. The results were as follows.

Case 16: dienestrol (DE) positive
Case 17: estriol (E3) positive
Case 18: methyl testosterone (MT) positive

The remaining extracts were used for FTIR investigation.

Procedure IR investigations

Case 16. The residue of the meat extract was dissolved in 2 ml methanol. 2 mg of hexane was added to extract fats; this procedure was repeated twice. The methanol phase was evaporated and redissolved in 100 µl methanol. The solution was powdered with 5 mg of KBr. The mixture was transferred to a Barnes diffuse reflection sample microcup, and a DRIFT spectrum was scanned with 2000 scans.
Case 17 and 18. The residues of the HPLC fractions were dissolved in 100 µl methanol, powdered with 5 mg of KBr and a DRIFT spectrum with 1000 scans was recorded (spectrum 17 and 18).
In the spectra matrix interferences were quite obvious.

Results

The Adequate Peaks Searches were applied on the spectrum obtained; the results are collected in Table 3.

Table 3. Score list of the Adequate Peaks Search for 3 samples of administration sites.

| Case | Conditions | Filename | Score |
|---|---|---|---|
| 16 | 2000 scans | MON42156 | DE: 76 |
| 17 | 1000 scans | MON42181 | E3: 10 |
| 18 | 1000 scans | MON42182 | MT: 75 |

In case 16 the presence of dienestrol is confirmed.
In case 17 the amount of estriol, if present, is too less for confirmation.
In case 18 the presence of methyl testosterone is confirmed.

## 4. CONCLUSION

The Adequate Peaks Search offers a reliable method for unambiguous confirmation of the presence of anabolics.
False positive results are excluded to the highest possible degree.
The method does not judge about the absence of an analyte.

In case of the presence of implanted tablets (case 7-15), infrared spectroscopy offers the easiest and quickest method of analyses. In less than half an hour a complete confirmation analysis can be performed.

ANNEX

CASE 01

1 SAMPLE FILE : MON42073
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42073.AFKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
91 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 1792.736 | 29 | 107 |
| 2 | 1772.484 | 32 | 36 |
| 3 | 1761.876 | 35 | 25 |
| 4 | 1731.981 | 100 | 20 |
| 5 | 1717.516 | 66 | 33 |
| 6 | 1700.158 | 53 | 24 |
| 7 | 1674.120 | 95 | 22 |
| 8 | 1653.869 | 56 | 10 |
| 9 | 1648.082 | 50 | 44 |
| 10 | 1635.546 | 50 | 19 |
| 11 | 1623.974 | 44 | 33 |
| 12 | 1617.223 | 47 | 12 |
| 13 | 1607.579 | 60 | 21 |
| 14 | 1576.720 | 43 | 14 |
| 15 | 1569.970 | 41 | 14 |
| 16 | 1560.326 | 41 | 14 |
| 17 | 1554.540 | 35 | 14 |
| 18 | 1540.075 | 35 | 33 |
| 19 | 1534.289 | 34 | 23 |
| 20 | 1525.609 | 34 | 57 |
| 21 | 1521.752 | 35 | 17 |
| 22 | 1517.894 | 35 | 26 |
| 23 | 1507.287 | 38 | 21 |
| 24 | 1496.679 | 37 | 45 |
| 25 | 1489.928 | 38 | 33 |
| 26 | 1472.570 | 48 | 37 |
| 27 | 1457.140 | 54 | 69 |
| 28 | 1449.425 | 53 | 52 |
| 29 | 1436.889 | 52 | 47 |
| 30 | 1433.996 | 51 | 48 |
| 31 | 1419.530 | 50 | 29 |
| 32 | 1412.780 | 50 | 42 |
| 33 | 1383.849 | 67 | 27 |
| 34 | 1374.206 | 61 | 54 |
| 35 | 1364.562 | 70 | 58 |
| 36 | 1331.774 | 48 | 31 |
| 37 | 1321.166 | 44 | 54 |
| 38 | 1308.629 | 48 | 63 |
| 39 | 1299.950 | 52 | 20 |
| 40 | 1272.948 | 68 | 20 |
| 41 | 1261.376 | 86 | 23 |
| 42 | 1253.661 | 82 | 23 |
| 43 | 1234.374 | 52 | 46 |
| 44 | 1211.230 | 44 | 25 |
| 45 | 1186.156 | 50 | 36 |
| 46 | 1178.442 | 46 | 29 |
| 47 | 1160.119 | 38 | 47 |
| 48 | 1151.440 | 42 | 37 |
| 49 | 1135.046 | 43 | 72 |
| 50 | 1119.616 | 50 | 41 |
| 51 | 1080.077 | 51 | 42 |
| 52 | 1055.969 | 50 | 40 |
| 53 | 1022.216 | 48 | 45 |
| 54 | 1008.715 | 45 | 25 |
| 55 | 964.355 | 57 | 38 |
| 56 | 947.961 | 43 | 41 |
| 57 | 940.246 | 46 | 23 |
| 58 | 917.101 | 43 | 61 |
| 59 | 903.600 | 41 | 49 |
| 60 | 896.850 | 42 | 33 |
| 61 | 887.206 | 45 | 28 |
| 62 | 871.777 | 55 | 25 |
| 63 | 851.525 | 42 | 34 |
| 64 | 838.989 | 42 | 111 |
| 65 | 835.131 | 42 | 162 |
| 66 | 807.165 | 38 | 32 |
| 67 | 803.308 | 37 | 37 |
| 68 | 785.949 | 38 | 21 |
| 69 | 778.234 | 39 | 37 |
| 70 | 764.733 | 37 | 31 |
| 71 | 760.876 | 37 | 33 |
| 72 | 751.232 | 37 | 48 |
| 73 | 738.696 | 43 | 20 |
| 74 | 729.052 | 37 | 33 |
| 75 | 697.229 | 50 | 51 |
| 76 | 693.371 | 48 | 17 |
| 77 | 679.870 | 43 | 64 |
| 78 | 673.120 | 41 | 25 |
| 79 | 667.334 | 41 | 27 |
| 80 | 658.654 | 41 | 49 |
| 81 | 652.868 | 41 | 24 |
| 82 | 647.082 | 42 | 57 |
| 83 | 637.439 | 43 | 81 |
| 84 | 615.258 | 55 | 18 |
| 85 | 597.900 | 49 | 91 |
| 86 | 590.185 | 51 | 47 |
| 87 | 583.435 | 49 | 25 |
| 88 | 559.326 | 44 | 132 |
| 89 | 550.647 | 46 | 12 |

NAME OF SAMPLE FILE : MON42073
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42073.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 29 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 16 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 40 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 38 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 14 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 26 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 31 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 35 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 14 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 42 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 33 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 41 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 25 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 5 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 35 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 33 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 22 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 37 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 20 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 45 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 28 | 14 | HOR42017.APKL | PROGESTERONE |
| 41 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 100 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 18 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 13 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 17 | 17 | HOR42003.APKL | DIENESTROL |
| 16 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 20 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 38 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 0 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

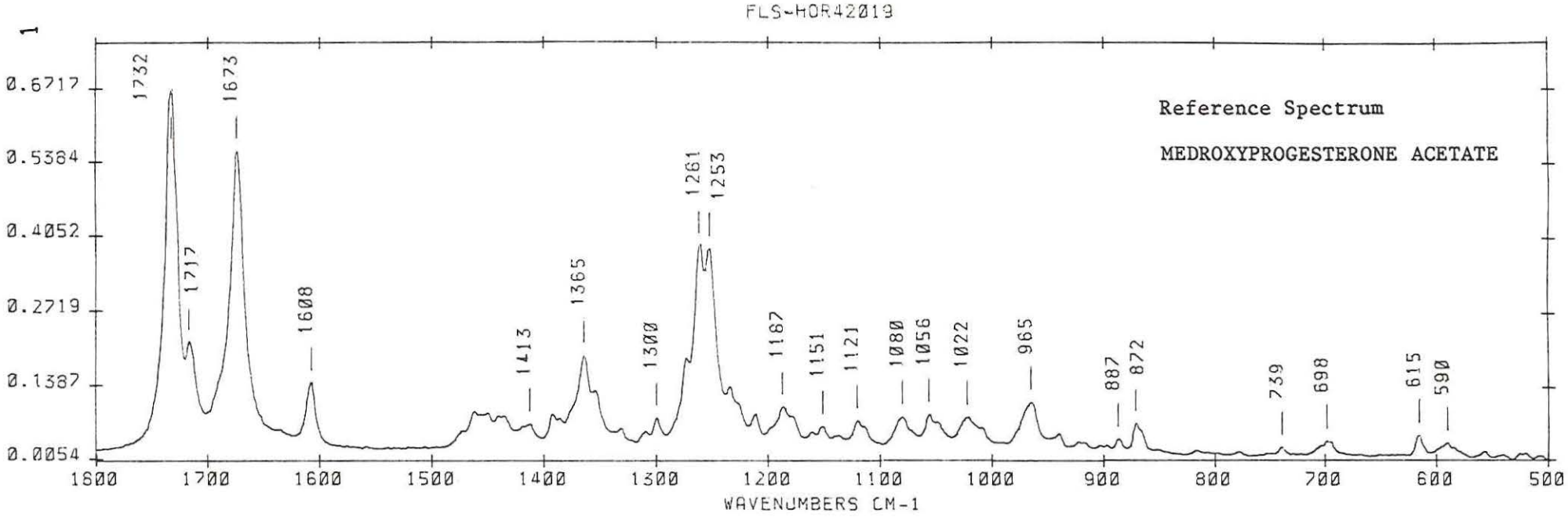
"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42073.APKL

| REF | SAMP |
|---|---|
| 1731.977 | 1731.981 |
| 1716.547 | 1717.516 |
| 1673.151 | 1674.120 |
| 1607.574 | 1607.579 |
| 1364.556 | 1364.562 |
| 1261.370 | 1261.376 |
| 1252.691 | 1253.661 |
| 1187.115 | 1186.156 |
| 1080.071 | 1080.077 |
| 1055.962 | 1055.969 |
| 965.312 | 964.355 |

NUMBER OF MATCHES : 11
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 100

Conclusion: presence of medroxyprogesterone acetate confirmed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0.0054
1732
1717
1673
1608
1413
1365
1300
1261
1253
1187
1151
1121
1080
1056
1022
965
887
872
739
698
615
590
Reference Spectrum
MEDROXYPROGESTERONE ACETATE
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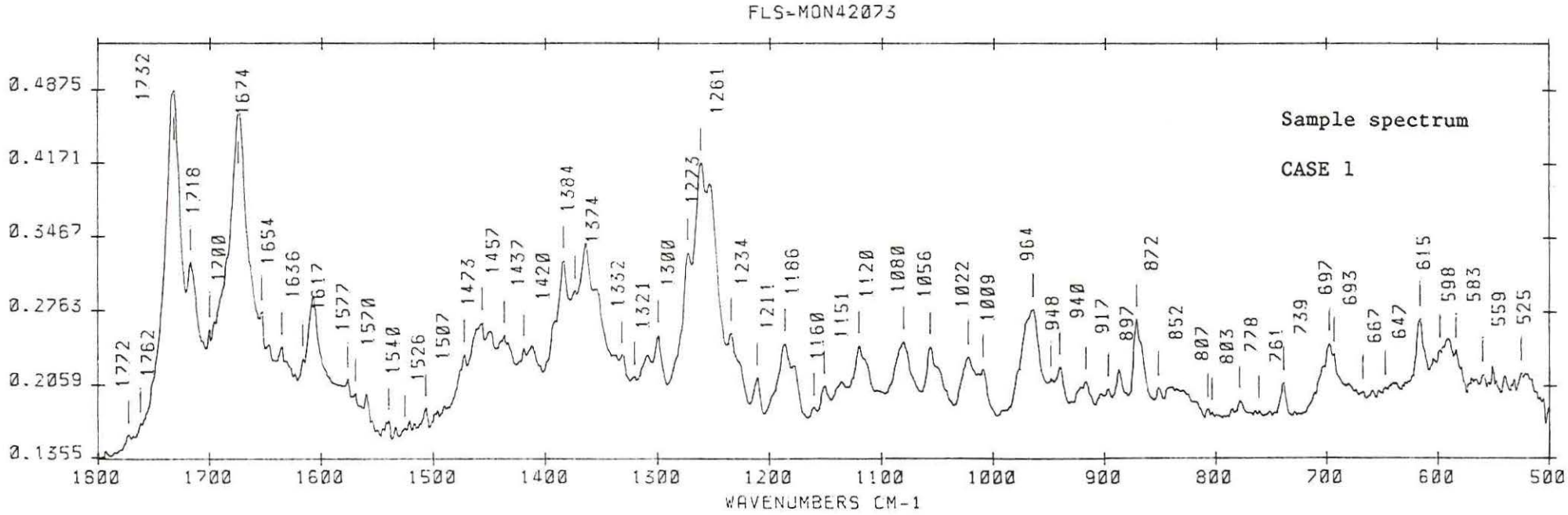
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42073
0.4875
0.4171
0.3467
0.2763
0.2059
0.1355
1772
1762
1732
1718
1700
1674
1654
1636
1617
1577
1570
1540
1526
1507
1473
1457
1437
1420
1384
1374
1332
1321
1300
1261
1234
1211
1186
1160
1151
1120
1080
1056
1022
1009
964
948
940
917
897
872
852
807
803
778
761
739
697
693
667
647
615
598
583
559
525
Sample spectrum
CASE 1
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

CASE 02

2 SAMPLE FILE : MON42093
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42093.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
83 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 510.142 | 3 | 10 |
| 2 | 520.750 | 8 | 13 |
| 3 | 540.037 | 4 | 7 |
| 4 | 557.396 | 9 | 9 |
| 5 | 567.039 | 7 | 6 |
| 6 | 590.184 | 22 | 14 |
| 7 | 616.221 | 27 | 7 |
| 8 | 641.295 | 4 | 14 |
| 9 | 651.903 | 3 | 7 |
| 10 | 658.653 | 2 | 4 |
| 11 | 662.510 | 1 | 8 |
| 12 | 678.905 | 3 | 12 |
| 13 | 698.192 | 21 | 14 |
| 14 | 721.336 | 3 | 12 |
| 15 | 727.122 | 2 | 5 |
| 16 | 739.659 | 14 | 5 |
| 17 | 751.231 | 3 | 6 |
| 18 | 767.625 | 0 | 1 |
| 19 | 778.233 | 2 | 6 |
| 20 | 807.164 | 5 | 13 |
| 21 | 817.772 | 6 | 6 |
| 22 | 842.845 | 6 | 6 |
| 23 | 851.524 | 8 | 13 |
| 24 | 871.776 | 36 | 12 |
| 25 | 887.205 | 22 | 11 |
| 26 | 896.849 | 18 | 11 |
| 27 | 903.599 | 15 | 12 |
| 28 | 917.100 | 20 | 11 |
| 29 | 922.887 | 18 | 10 |
| 30 | 929.637 | 14 | 48 |
| 31 | 940.245 | 25 | 10 |
| 32 | 946.995 | 20 | 39 |
| 33 | 965.318 | 41 | 23 |
| 34 | 989.427 | 14 | 48 |
| 35 | 1008.714 | 28 | 13 |
| 36 | 1022.215 | 33 | 26 |
| 37 | 1048.253 | 30 | 20 |
| 38 | 1055.968 | 36 | 14 |
| 39 | 1079.112 | 35 | 19 |
| 40 | 1114.793 | 30 | 16 |
| 41 | 1119.615 | 32 | 15 |
| 42 | 1136.973 | 22 | 31 |
| 43 | 1151.439 | 28 | 15 |
| 44 | 1160.118 | 23 | 17 |
| 45 | 1177.476 | 33 | 14 |
| 46 | 1186.156 | 38 | 19 |
| 47 | 1211.229 | 33 | 13 |
| 48 | 1234.373 | 43 | 34 |
| 49 | 1254.625 | 79 | 22 |
| 50 | 1261.375 | 83 | 17 |
| 51 | 1272.948 | 58 | 15 |
| 52 | 1299.950 | 34 | 10 |
| 53 | 1309.593 | 24 | 15 |
| 54 | 1321.165 | 16 | 24 |
| 55 | 1331.773 | 26 | 12 |
| 56 | 1337.559 | 23 | 42 |
| 57 | 1354.918 | 42 | 17 |
| 58 | 1364.561 | 55 | 15 |
| 59 | 1384.813 | 31 | 20 |
| 60 | 1392.528 | 32 | 14 |
| 61 | 1412.779 | 28 | 19 |
| 62 | 1433.995 | 31 | 14 |
| 63 | 1440.746 | 30 | 17 |
| 64 | 1450.389 | 33 | 22 |
| 65 | 1461.961 | 33 | 29 |
| 66 | 1498.607 | 7 | 38 |
| 67 | 1516.930 | 7 | 51 |
| 68 | 1522.716 | 6 | 24 |
| 69 | 1532.359 | 6 | 17 |
| 70 | 1537.181 | 6 | 10 |
| 71 | 1552.611 | 6 | 66 |
| 72 | 1556.468 | 7 | 11 |
| 73 | 1559.361 | 7 | 21 |
| 74 | 1562.254 | 7 | 9 |
| 75 | 1573.827 | 8 | 41 |
| 76 | 1607.579 | 44 | 13 |
| 77 | 1637.474 | 18 | 37 |
| 78 | 1650.975 | 22 | 26 |
| 79 | 1674.120 | 90 | 20 |
| 80 | 1702.086 | 29 | 92 |
| 81 | 1716.551 | 51 | 18 |
| 82 | 1731.981 | 100 | 17 |
| 83 | 1774.413 | 9 | 37 |

NAME OF SAMPLE FILE : MON42093
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42093.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 29 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 12 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 33 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 23 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 20 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 33 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 19 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 28 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 35 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 35 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 33 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 35 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 29 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 25 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 7 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 37 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 13 | 15 | HOR42032.APKL | ETHISTERONE |
| 6 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 36 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 90 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 13 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 17 | 17 | HOR42003.APKL | DIENESTROL |
| 33 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 23 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42093.APKL

| REF | SAMP |
|---|---|
| 965.312 | 965.318 |
| 1055.962 | 1055.968 |
| 1080.071 | 1079.112 |
| 1187.115 | 1186.156 |
| 1261.370 | 1261.375 |
| 1364.556 | 1364.561 |
| 1607.574 | 1607.579 |
| 1673.151 | 1674.120 |
| 1716.547 | 1716.551 |
| 1731.977 | 1731.981 |

NUMBER OF MATCHES : 10
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 90

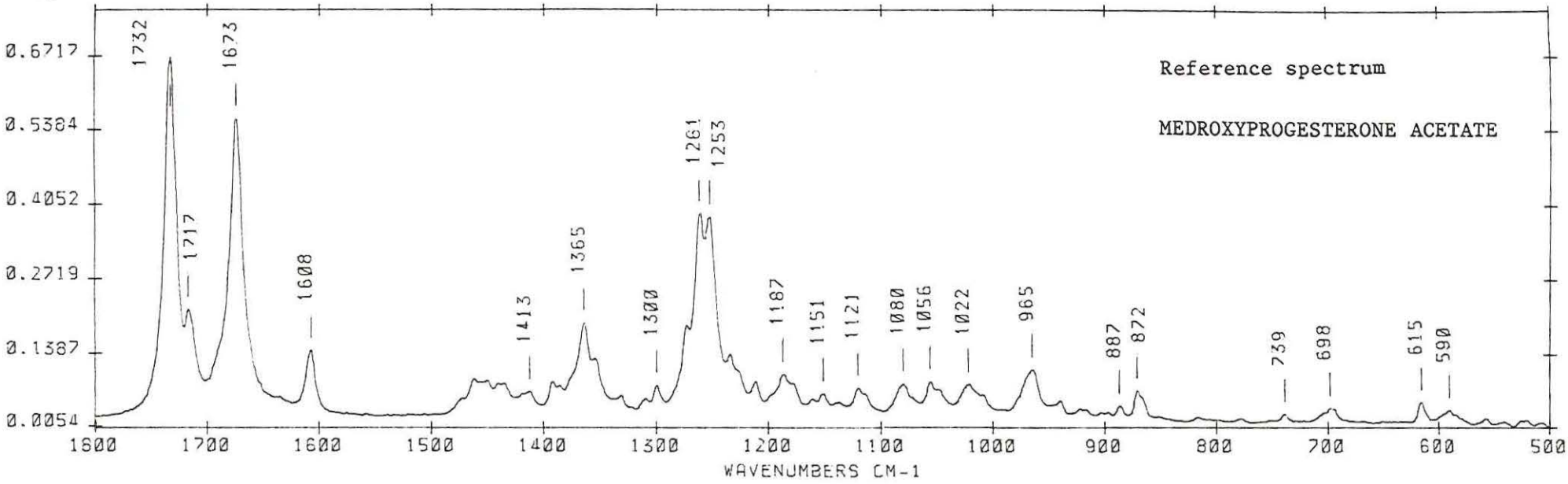
Mismat ch

| REF | SAMPLE |
|---|---|
| 1253 | peak present at 1255 $cm^{-1}$ |

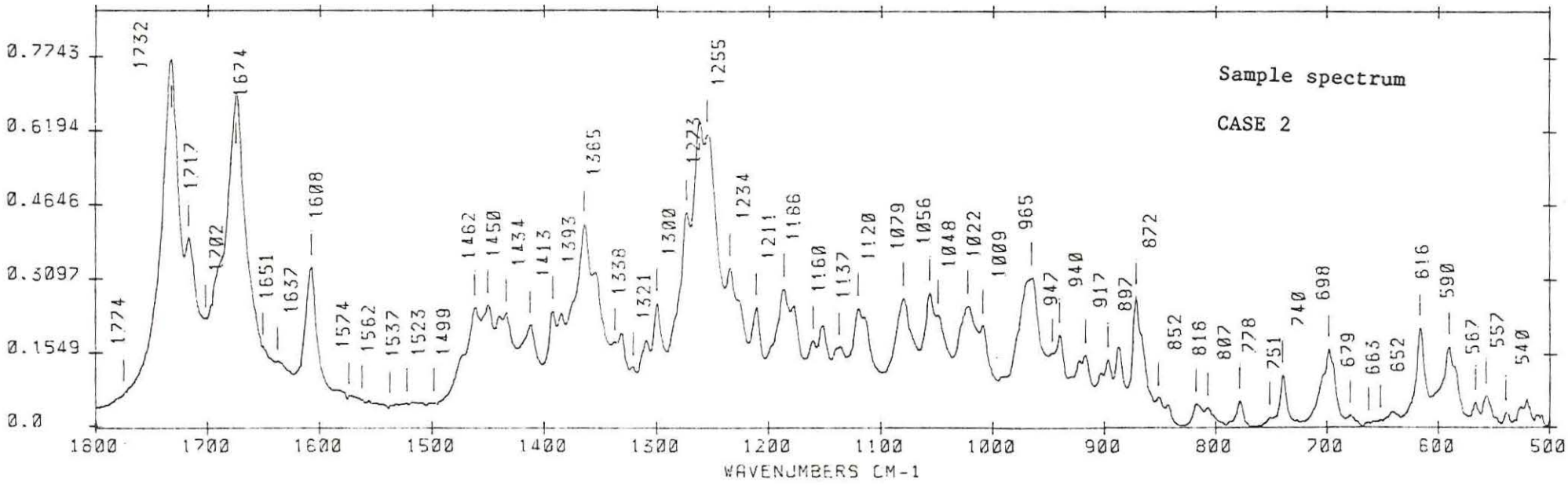
Conclusion: presence of medroxyprogesterone acetate confirmed

2

FLS-HOR42019




FLS-MON42093



3

CASE 03
SAMPLE FILE : MON42095
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42095.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
78 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 509.178 | 4 | 4 |
| 2 | 512.071 | 3 | 4 |
| 3 | 519.786 | 9 | 7 |
| 4 | 526.536 | 7 | 4 |
| 5 | 539.073 | 5 | 5 |
| 6 | 556.431 | 10 | 7 |
| 7 | 567.039 | 7 | 7 |
| 8 | 590.184 | 26 | 14 |
| 9 | 616.221 | 30 | 8 |
| 10 | 640.330 | 5 | 9 |
| 11 | 652.867 | 1 | 9 |
| 12 | 658.653 | 2 | 14 |
| 13 | 678.905 | 4 | 8 |
| 14 | 698.192 | 25 | 15 |
| 15 | 739.659 | 18 | 5 |
| 16 | 751.231 | 4 | 6 |
| 17 | 761.839 | 0 | 2 |
| 18 | 778.233 | 9 | 6 |
| 19 | 807.164 | 7 | 14 |
| 20 | 817.772 | 7 | 8 |
| 21 | 842.845 | 8 | 7 |
| 22 | 851.524 | 11 | 14 |
| 23 | 871.776 | 39 | 14 |
| 24 | 887.205 | 26 | 9 |
| 25 | 896.849 | 21 | 12 |
| 26 | 902.635 | 17 | 15 |
| 27 | 917.100 | 23 | 11 |
| 28 | 922.887 | 21 | 10 |
| 29 | 940.245 | 29 | 11 |
| 30 | 946.031 | 24 | 54 |
| 31 | 966.283 | 45 | 26 |
| 32 | 990.391 | 16 | 31 |
| 33 | 1008.714 | 30 | 13 |
| 34 | 1022.215 | 35 | 29 |
| 35 | 1049.217 | 32 | 24 |
| 36 | 1055.968 | 38 | 14 |
| 37 | 1079.112 | 37 | 18 |
| 38 | 1113.829 | 30 | 12 |
| 39 | 1119.615 | 32 | 14 |
| 40 | 1136.973 | 21 | 31 |
| 41 | 1151.439 | 29 | 14 |
| 42 | 1160.118 | 25 | 17 |
| 43 | 1178.441 | 35 | 17 |
| 44 | 1186.156 | 41 | 19 |
| 45 | 1211.229 | 36 | 14 |
| 46 | 1234.373 | 47 | 36 |
| 47 | 1253.661 | 81 | 20 |
| 48 | 1261.375 | 84 | 17 |
| 49 | 1272.948 | 61 | 17 |
| 50 | 1299.950 | 37 | 10 |
| 51 | 1309.593 | 27 | 15 |
| 52 | 1322.130 | 19 | 20 |
| 53 | 1331.773 | 29 | 13 |
| 54 | 1337.559 | 26 | 46 |
| 55 | 1354.918 | 45 | 17 |
| 56 | 1364.561 | 58 | 17 |
| 57 | 1384.813 | 33 | 17 |
| 58 | 1392.528 | 35 | 14 |
| 59 | 1412.779 | 30 | 20 |
| 60 | 1433.995 | 34 | 14 |
| 61 | 1439.781 | 33 | 31 |
| 62 | 1450.389 | 36 | 21 |
| 63 | 1461.961 | 36 | 31 |
| 64 | 1497.643 | 9 | 71 |
| 65 | 1509.215 | 9 | 37 |
| 66 | 1514.037 | 9 | 56 |
| 67 | 1518.858 | 9 | 15 |
| 68 | 1522.716 | 9 | 75 |
| 69 | 1543.932 | 7 | 98 |
| 70 | 1551.646 | 7 | 41 |
| 71 | 1556.468 | 8 | 19 |
| 72 | 1559.361 | 8 | 56 |
| 73 | 1574.791 | 9 | 67 |
| 74 | 1607.579 | 46 | 14 |
| 75 | 1637.474 | 20 | 39 |
| 76 | 1674.120 | 90 | 21 |
| 77 | 1716.551 | 55 | 19 |
| 78 | 1731.981 | 100 | 17 |

NAME OF SAMPLE FILE : MON42095
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42095.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 18 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 16 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 26 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 20 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 33 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 25 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 28 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 42 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 33 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 35 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 0 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 29 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 25 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 18 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 0 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 7 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 37 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 13 | 15 | HOR42032.APKL | ETHISTERONE |
| 6 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 40 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 100 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 8 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 23 | 17 | HOR42003.APKL | DIENESTROL |
| 33 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 13 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 23 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 7 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

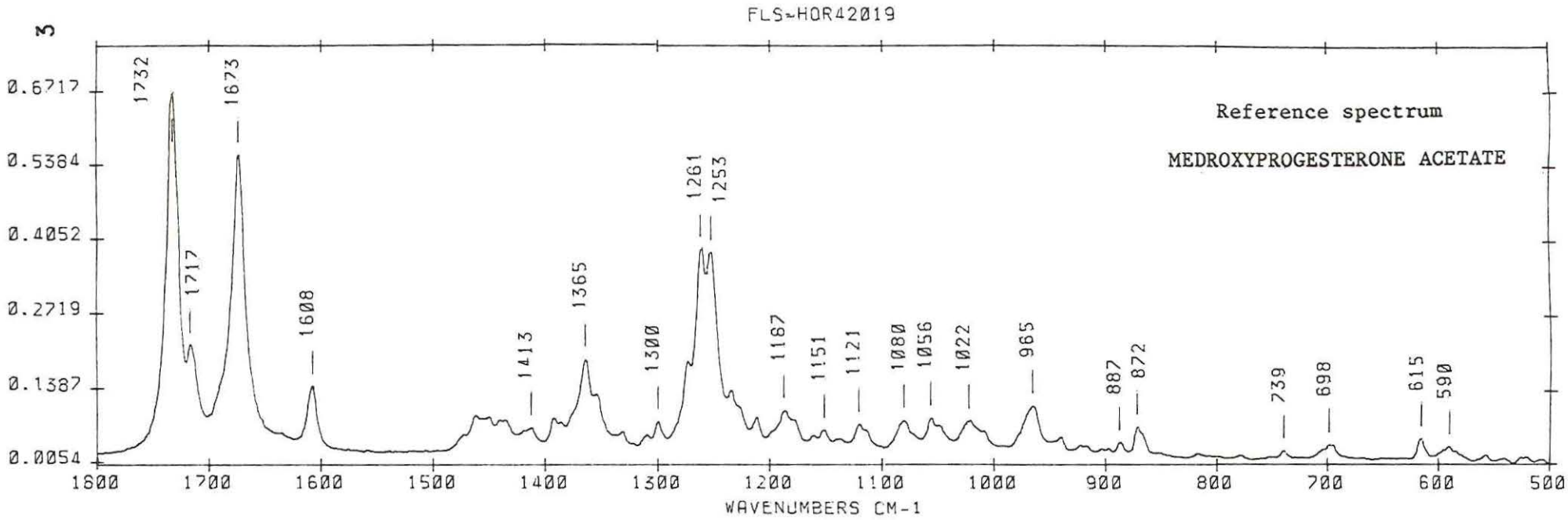
"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

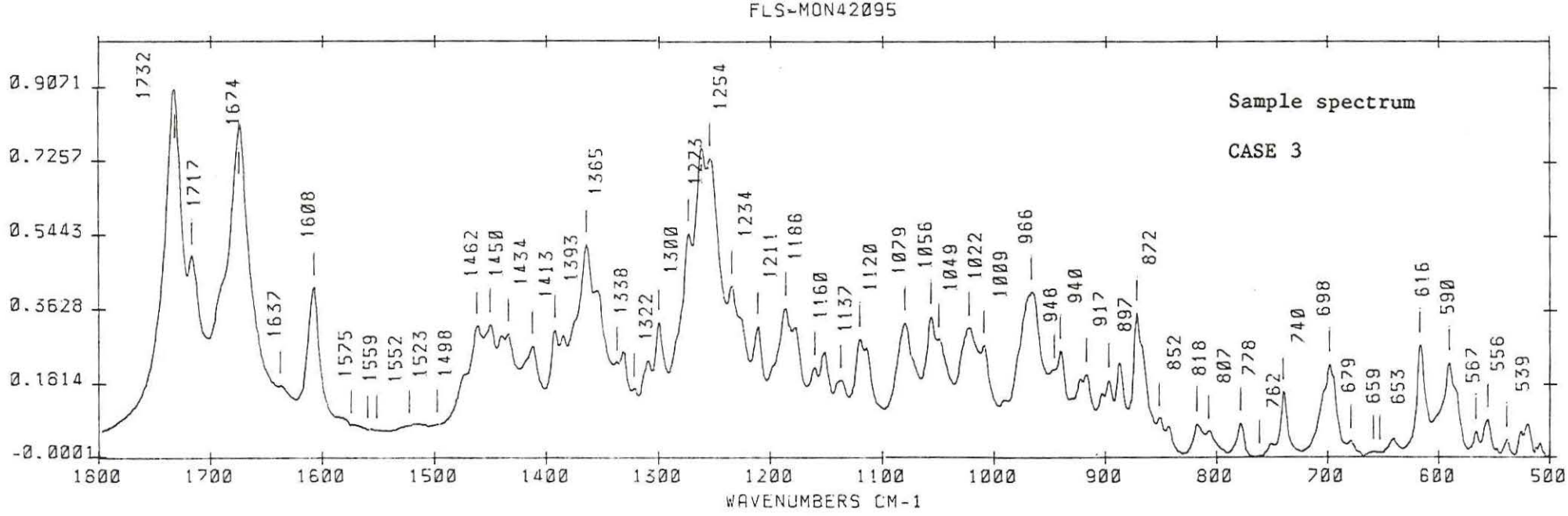
ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42095.APKL

| REF | SAMP |
|---|---|
| 965.312 | 966.283 |
| 1055.962 | 1055.968 |
| 1080.071 | 1079.112 |
| 1187.115 | 1186.156 |
| 1252.691 | 1253.661 |
| 1261.370 | 1261.375 |
| 1364.556 | 1364.561 |
| 1607.574 | 1607.579 |
| 1673.151 | 1674.120 |
| 1716.547 | 1716.551 |
| 1731.977 | 1731.981 |

NUMBER OF MATCHES ... : 11
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 100

Conclusion: presence of medroxyprogesterone acetate confirmed


FLS-HOR42019
3
Reference spectrum
MEDROXYPROGESTERONE ACETATE
0.6717
0.5384
0.4052
0.2719
0.1387
0.0054
1732
1717
1673
1608
1413
1365
1300
1261
1253
1187
1151
1121
1080
1056
1022
965
887
872
739
698
615
590
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42095
Sample spectrum
CASE 3
0.9071
0.7257
0.5443
0.3628
0.1814
-0.0001
1732
1717
1674
1637
1608
1575
1559
1552
1523
1498
1462
1450
1434
1413
1393
1365
1338
1322
1300
1273
1254
1234
1211
1186
1160
1137
1120
1079
1056
1049
1022
1009
966
948
940
917
897
872
852
818
807
778
762
740
698
679
659
653
616
590
567
556
539
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

4

CASE 04
SAMPLE FILE : MON42096
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42096.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
79 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 510.142 | 4 | 12 |
| 2 | 519.786 | 10 | 8 |
| 3 | 526.536 | 7 | 4 |
| 4 | 539.073 | 5 | 7 |
| 5 | 555.467 | 10 | 8 |
| 6 | 567.039 | 8 | 6 |
| 7 | 590.184 | 23 | 14 |
| 8 | 600.792 | 11 | 12 |
| 9 | 616.221 | 28 | 8 |
| 10 | 627.794 | 4 | 10 |
| 11 | 631.651 | 3 | 12 |
| 12 | 641.295 | 5 | 9 |
| 13 | 657.689 | 1 | 6 |
| 14 | 662.510 | 1 | 3 |
| 15 | 679.869 | 3 | 7 |
| 16 | 698.192 | 22 | 14 |
| 17 | 720.372 | 1 | 4 |
| 18 | 739.659 | 15 | 6 |
| 19 | 762.803 | 0 | 2 |
| 20 | 778.233 | 7 | 7 |
| 21 | 807.164 | 5 | 13 |
| 22 | 817.772 | 7 | 6 |
| 23 | 831.273 | 1 | 7 |
| 24 | 842.845 | 6 | 6 |
| 25 | 851.524 | 9 | 12 |
| 26 | 871.776 | 37 | 12 |
| 27 | 887.205 | 23 | 9 |
| 28 | 896.849 | 19 | 11 |
| 29 | 902.635 | 16 | 17 |
| 30 | 917.100 | 20 | 12 |
| 31 | 922.887 | 19 | 10 |
| 32 | 940.245 | 26 | 11 |
| 33 | 965.318 | 43 | 23 |
| 34 | 990.391 | 13 | 27 |
| 35 | 1008.714 | 27 | 12 |
| 36 | 1023.180 | 32 | 25 |
| 37 | 1048.253 | 28 | 19 |
| 38 | 1055.968 | 35 | 14 |
| 39 | 1079.112 | 33 | 17 |
| 40 | 1113.829 | 27 | 12 |
| 41 | 1119.615 | 30 | 14 |
| 42 | 1136.009 | 20 | 28 |
| 43 | 1151.439 | 26 | 14 |
| 44 | 1160.118 | 21 | 17 |
| 45 | 1177.476 | 31 | 14 |
| 46 | 1187.120 | 37 | 15 |
| 47 | 1211.229 | 31 | 13 |
| 48 | 1234.373 | 43 | 30 |
| 49 | 1253.661 | 81 | 18 |
| 50 | 1261.375 | 84 | 17 |
| 51 | 1272.948 | 58 | 15 |
| 52 | 1299.950 | 33 | 10 |
| 53 | 1308.629 | 22 | 19 |
| 54 | 1322.130 | 15 | 19 |
| 55 | 1331.773 | 24 | 12 |
| 56 | 1337.559 | 22 | 45 |
| 57 | 1354.918 | 41 | 16 |
| 58 | 1364.561 | 54 | 15 |
| 59 | 1384.813 | 31 | 18 |
| 60 | 1392.528 | 30 | 14 |
| 61 | 1412.779 | 26 | 19 |
| 62 | 1433.995 | 29 | 14 |
| 63 | 1440.746 | 29 | 19 |
| 64 | 1450.389 | 31 | 20 |
| 65 | 1461.961 | 31 | 15 |
| 66 | 1472.569 | 19 | 17 |
| 67 | 1507.286 | 6 | 24 |
| 68 | 1512.108 | 6 | 37 |
| 69 | 1516.930 | 6 | 25 |
| 70 | 1522.716 | 6 | 27 |
| 71 | 1533.324 | 5 | 25 |
| 72 | 1542.003 | 5 | 27 |
| 73 | 1559.361 | 7 | 27 |
| 74 | 1569.969 | 7 | 25 |
| 75 | 1607.579 | 43 | 14 |
| 76 | 1636.510 | 18 | 29 |
| 77 | 1674.120 | 90 | 19 |
| 78 | 1716.551 | 52 | 17 |
| 79 | 1731.981 | 100 | 16 |

NAME OF SAMPLE FILE : MON42096
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42096.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 11 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 12 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 33 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 31 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 35 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 35 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 25 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 35 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 0 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 25 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 35 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 25 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-1:D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 22 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 0 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 31 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 13 | 15 | HOR42032.APKL | ETHISTERONE |
| 13 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 40 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 10 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 100 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 13 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 23 | 17 | HOR42003.APKL | DIENESTROL |
| 38 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 26 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 23 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

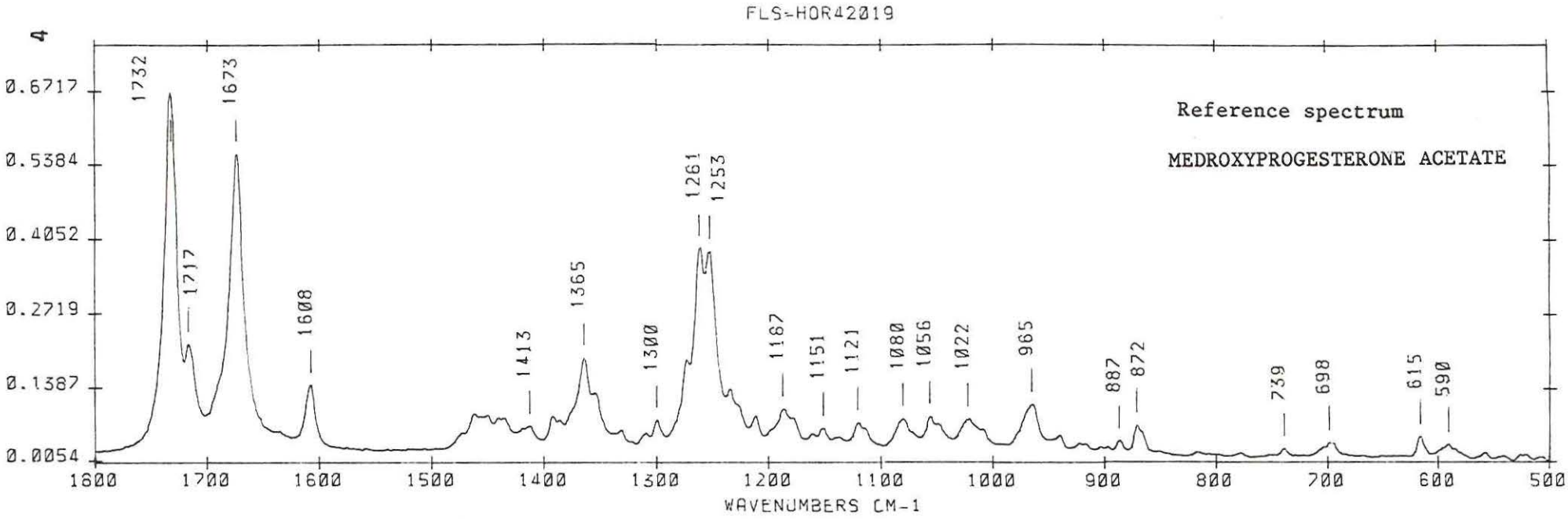
"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

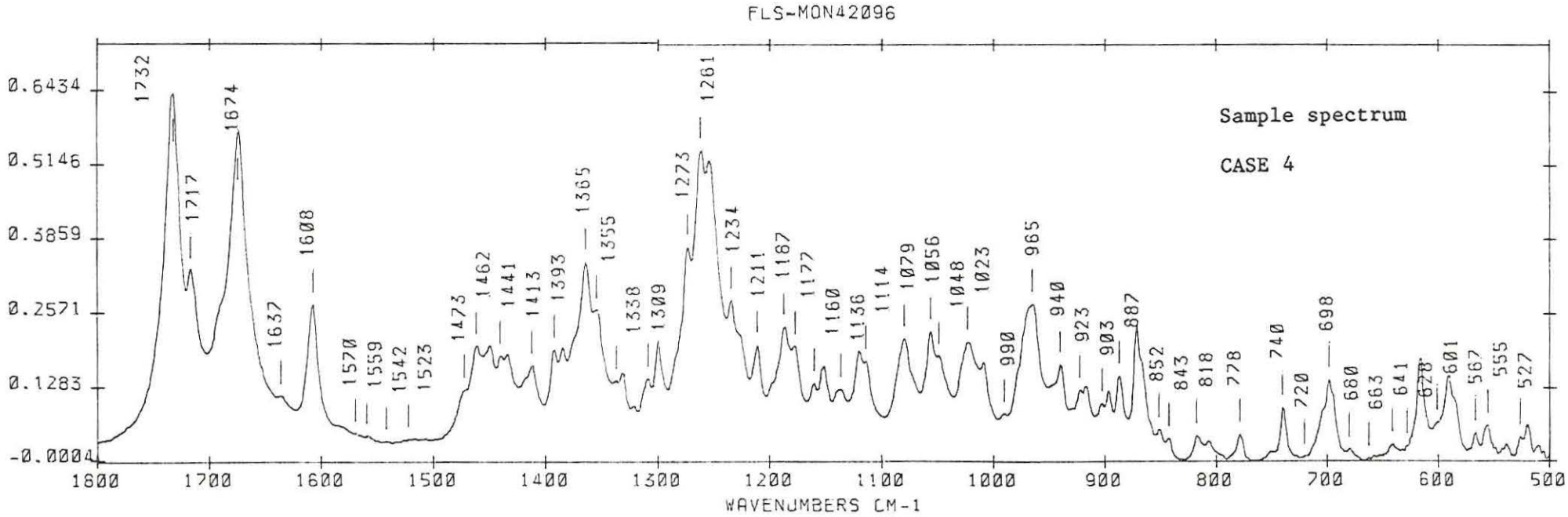
ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42096.APKL

| REF | SAMP |
|---|---|
| 965.312 | 965.318 |
| 1055.962 | 1055.968 |
| 1080.071 | 1079.112 |
| 1187.115 | 1187.120 |
| 1252.691 | 1253.661 |
| 1261.370 | 1261.375 |
| 1364.556 | 1364.561 |
| 1607.574 | 1607.579 |
| 1673.151 | 1674.120 |
| 1716.547 | 1716.551 |
| 1731.977 | 1731.981 |

NUMBER OF MATCHES : 11
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 100

Conclusion: presence of medroxyprogesterone acetate confirmed


FLS-HOR42019
4
0.6717
0.5384
0.4052
0.2719
0.1387
0.0054
1732
1717
1673
1608
1413
1365
1300
1261
1253
1187
1151
1121
1080
1056
1022
965
887
872
739
698
615
590
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1
Reference spectrum
MEDROXYPROGESTERONE ACETATE


FLS-MON42096
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0.3859
0.2571
0.1283
-0.0004
1732
1717
1674
1637
1608
1570
1559
1542
1523
1473
1462
1441
1413
1393
1365
1355
1338
1309
1273
1261
1234
1211
1187
1177
1160
1136
1114
1079
1056
1048
1023
990
965
940
923
903
887
852
843
818
778
740
720
698
680
663
641
628
601
567
555
527
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1
Sample spectrum
CASE 4

5

CASE 05
SAMPLE FILE : MON42097
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42097.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
81 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 510.142 | 4 | 10 |
| 2 | 518.821 | 10 | 12 |
| 3 | 539.073 | 4 | 6 |
| 4 | 556.431 | 10 | 7 |
| 5 | 567.039 | 5 | 7 |
| 6 | 590.184 | 24 | 15 |
| 7 | 616.221 | 30 | 8 |
| 8 | 631.651 | 2 | 17 |
| 9 | 640.330 | 5 | 11 |
| 10 | 658.653 | 1 | 6 |
| 11 | 665.404 | 0 | 2 |
| 12 | 679.869 | 4 | 8 |
| 13 | 698.192 | 24 | 16 |
| 14 | 739.659 | 16 | 5 |
| 15 | 751.231 | 4 | 6 |
| 16 | 778.233 | 9 | 7 |
| 17 | 807.164 | 7 | 14 |
| 18 | 817.772 | 9 | 8 |
| 19 | 842.845 | 8 | 7 |
| 20 | 851.524 | 11 | 14 |
| 21 | 871.776 | 40 | 14 |
| 22 | 887.205 | 26 | 9 |
| 23 | 896.849 | 21 | 13 |
| 24 | 903.599 | 19 | 15 |
| 25 | 917.100 | 23 | 12 |
| 26 | 922.887 | 22 | 12 |
| 27 | 940.245 | 30 | 11 |
| 28 | 946.995 | 25 | 33 |
| 29 | 965.318 | 48 | 24 |
| 30 | 990.391 | 17 | 31 |
| 31 | 1008.714 | 32 | 13 |
| 32 | 1022.215 | 38 | 25 |
| 33 | 1048.253 | 33 | 21 |
| 34 | 1055.968 | 41 | 14 |
| 35 | 1080.077 | 38 | 20 |
| 36 | 1113.829 | 31 | 13 |
| 37 | 1119.615 | 34 | 14 |
| 38 | 1136.009 | 22 | 34 |
| 39 | 1151.439 | 31 | 14 |
| 40 | 1160.118 | 25 | 19 |
| 41 | 1178.441 | 36 | 17 |
| 42 | 1187.120 | 43 | 17 |
| 43 | 1211.229 | 37 | 14 |
| 44 | 1234.373 | 50 | 36 |
| 45 | 1253.661 | 86 | 24 |
| 46 | 1261.375 | 89 | 19 |
| 47 | 1272.948 | 65 | 17 |
| 48 | 1299.950 | 39 | 10 |
| 49 | 1308.629 | 28 | 25 |
| 50 | 1322.130 | 19 | 25 |
| 51 | 1331.773 | 29 | 12 |
| 52 | 1337.559 | 27 | 60 |
| 53 | 1355.882 | 48 | 21 |
| 54 | 1364.561 | 60 | 21 |
| 55 | 1384.813 | 36 | 26 |
| 56 | 1392.528 | 37 | 10 |
| 57 | 1412.779 | 31 | 16 |
| 58 | 1433.995 | 35 | 16 |
| 59 | 1440.746 | 35 | 31 |
| 60 | 1450.389 | 38 | 30 |
| 61 | 1461.961 | 38 | 33 |
| 62 | 1497.643 | 9 | 26 |
| 63 | 1500.536 | 9 | 41 |
| 64 | 1514.037 | 9 | 78 |
| 65 | 1518.858 | 9 | 10 |
| 66 | 1523.680 | 8 | 18 |
| 67 | 1527.538 | 8 | 62 |
| 68 | 1536.217 | 7 | 15 |
| 69 | 1541.039 | 7 | 14 |
| 70 | 1543.932 | 7 | 14 |
| 71 | 1552.611 | 7 | 42 |
| 72 | 1556.468 | 8 | 12 |
| 73 | 1568.041 | 9 | 23 |
| 74 | 1573.827 | 10 | 32 |
| 75 | 1607.579 | 48 | 14 |
| 76 | 1634.581 | 21 | 34 |
| 77 | 1637.474 | 22 | 23 |
| 78 | 1673.155 | 92 | 24 |
| 79 | 1716.551 | 59 | 22 |
| 80 | 1731.981 | 100 | 20 |
| 81 | 1784.664 | 8 | 71 |

NAME OF SAMPLE FILE : MON42097
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42097.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 25 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 16 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 26 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 20 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 28 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 31 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 35 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 42 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 25 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 35 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 0 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 17 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 29 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 25 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 22 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 0 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 7 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 37 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 13 | 15 | HOR42032.APKL | ETHISTERONE |
| 13 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 36 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 100 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 8 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 23 | 17 | HOR42003.APKL | DIENESTROL |
| 33 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 13 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 23 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

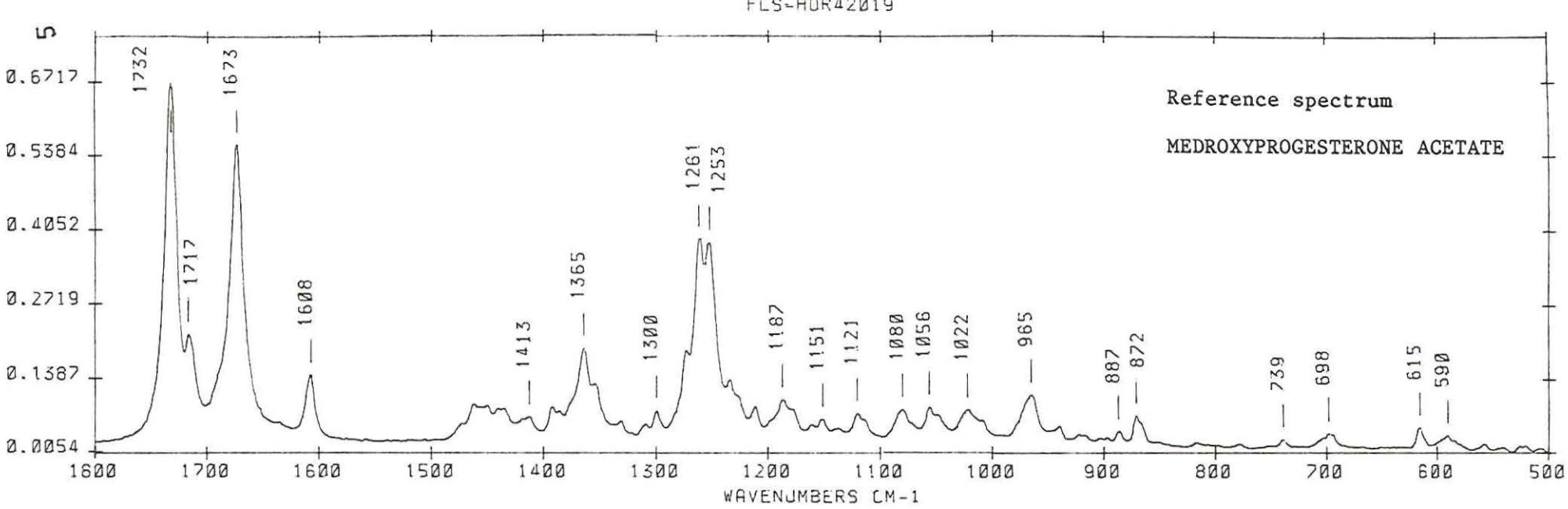
"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

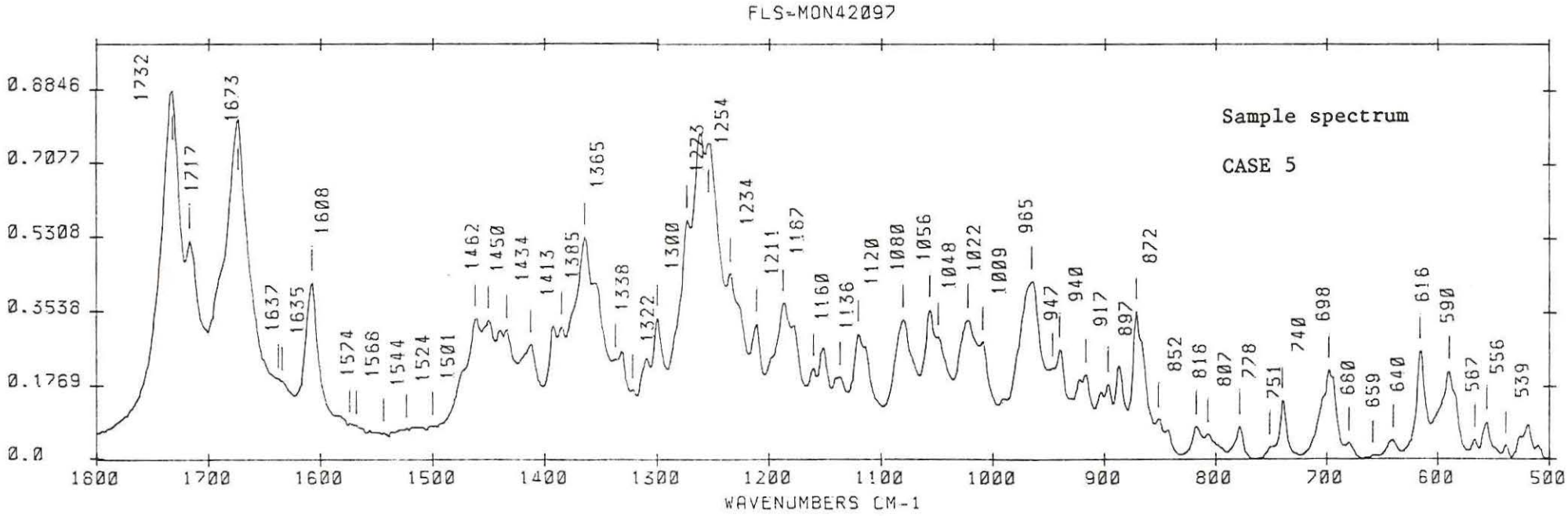
ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE HON42097.APKL

| REF | SAMP |
|---|---|
| 965.312 | 965.318 |
| 1055.962 | 1055.968 |
| 1080.071 | 1080.077 |
| 1187.115 | 1187.120 |
| 1252.691 | 1253.661 |
| 1261.370 | 1261.375 |
| 1364.556 | 1364.561 |
| 1607.574 | 1607.579 |
| 1673.151 | 1673.155 |
| 1716.547 | 1716.551 |
| 1731.977 | 1731.981 |

NUMBER OF MATCHES : 11
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 100

Conclusion: presence of medroxyprogesterone acetate confirmed


FLS-HOR42019
Reference spectrum
MEDROXYPROGESTERONE ACETATE
0.6717
0.5384
0.4052
0.2719
0.1387
0.0054
1732
1717
1673
1608
1413
1365
1300
1261
1253
1187
1151
1121
1080
1056
1022
965
887
872
739
698
615
590
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42097
Sample spectrum
CASE 5
0.8846
0.7077
0.5308
0.3538
0.1769
0.0
1732
1717
1673
1637
1635
1608
1574
1566
1544
1524
1501
1462
1450
1434
1413
1385
1365
1338
1322
1300
1273
1254
1234
1211
1187
1160
1136
1120
1080
1056
1048
1022
1009
965
947
940
917
897
872
852
816
807
778
751
740
698
680
659
640
616
590
567
556
539
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

6

CASE 06
SAMPLE FILE : MON42098
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42098.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
77 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 520.750 | 9 | 4 |
| 2 | 526.536 | 6 | 8 |
| 3 | 540.037 | 4 | 8 |
| 4 | 556.431 | 10 | 11 |
| 5 | 567.039 | 8 | 10 |
| 6 | 590.184 | 22 | 14 |
| 7 | 615.257 | 27 | 8 |
| 8 | 640.330 | 5 | 10 |
| 9 | 649.974 | 2 | 5 |
| 10 | 653.831 | 2 | 12 |
| 11 | 658.653 | 2 | 4 |
| 12 | 664.439 | 1 | 4 |
| 13 | 669.261 | 1 | 2 |
| 14 | 679.869 | 3 | 13 |
| 15 | 698.192 | 21 | 14 |
| 16 | 727.122 | 1 | 2 |
| 17 | 739.659 | 14 | 5 |
| 18 | 750.267 | 3 | 10 |
| 19 | 778.233 | 7 | 6 |
| 20 | 794.627 | 1 | 6 |
| 21 | 807.164 | 5 | 10 |
| 22 | 817.772 | 6 | 6 |
| 23 | 833.201 | 1 | 5 |
| 24 | 842.845 | 6 | 7 |
| 25 | 851.524 | 9 | 13 |
| 26 | 871.776 | 37 | 12 |
| 27 | 887.205 | 25 | 9 |
| 28 | 896.849 | 20 | 12 |
| 29 | 903.599 | 17 | 12 |
| 30 | 917.100 | 22 | 12 |
| 31 | 922.887 | 21 | 12 |
| 32 | 940.245 | 28 | 11 |
| 33 | 965.318 | 44 | 24 |
| 34 | 990.391 | 14 | 37 |
| 35 | 1008.714 | 28 | 13 |
| 36 | 1023.180 | 34 | 27 |
| 37 | 1048.253 | 30 | 21 |
| 38 | 1055.968 | 37 | 14 |
| 39 | 1080.077 | 35 | 19 |
| 40 | 1113.829 | 28 | 13 |
| 41 | 1120.579 | 30 | 19 |
| 42 | 1136.973 | 19 | 33 |
| 43 | 1151.439 | 26 | 14 |
| 44 | 1160.118 | 22 | 19 |
| 45 | 1178.441 | 31 | 17 |
| 46 | 1187.120 | 37 | 17 |
| 47 | 1211.229 | 32 | 14 |
| 48 | 1234.373 | 45 | 34 |
| 49 | 1253.661 | 82 | 22 |
| 50 | 1261.375 | 86 | 17 |
| 51 | 1272.948 | 59 | 17 |
| 52 | 1299.950 | 34 | 11 |
| 53 | 1309.593 | 24 | 21 |
| 54 | 1322.130 | 17 | 20 |
| 55 | 1331.773 | 25 | 13 |
| 56 | 1337.559 | 23 | 60 |
| 57 | 1354.918 | 42 | 16 |
| 58 | 1363.597 | 55 | 16 |
| 59 | 1384.813 | 34 | 18 |
| 60 | 1392.528 | 32 | 10 |
| 61 | 1412.779 | 27 | 15 |
| 62 | 1433.995 | 31 | 15 |
| 63 | 1439.781 | 31 | 29 |
| 64 | 1450.389 | 32 | 23 |
| 65 | 1461.961 | 33 | 31 |
| 66 | 1507.286 | 7 | 24 |
| 67 | 1516.930 | 7 | 48 |
| 68 | 1522.716 | 7 | 44 |
| 69 | 1533.324 | 6 | 7 |
| 70 | 1542.003 | 6 | 28 |
| 71 | 1559.361 | 8 | 17 |
| 72 | 1584.435 | 12 | 35 |
| 73 | 1607.579 | 43 | 13 |
| 74 | 1636.510 | 20 | 42 |
| 75 | 1674.120 | 91 | 21 |
| 76 | 1716.551 | 53 | 18 |
| 77 | 1771.981 | 100 | 17 |

NAME OF SAMPLE FILE : MON42098
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42098.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 14 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 8 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 26 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 7 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 28 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 31 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 26 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 32 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 35 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 25 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 35 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 0 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 29 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 25 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 0 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 30 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 7 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 31 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 13 | 15 | HOR42032.APKL | ETHISTERONE |
| 6 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 40 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 100 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 8 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 29 | 17 | HOR42003.APKL | DIENESTROL |
| 27 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 13 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 20 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 23 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

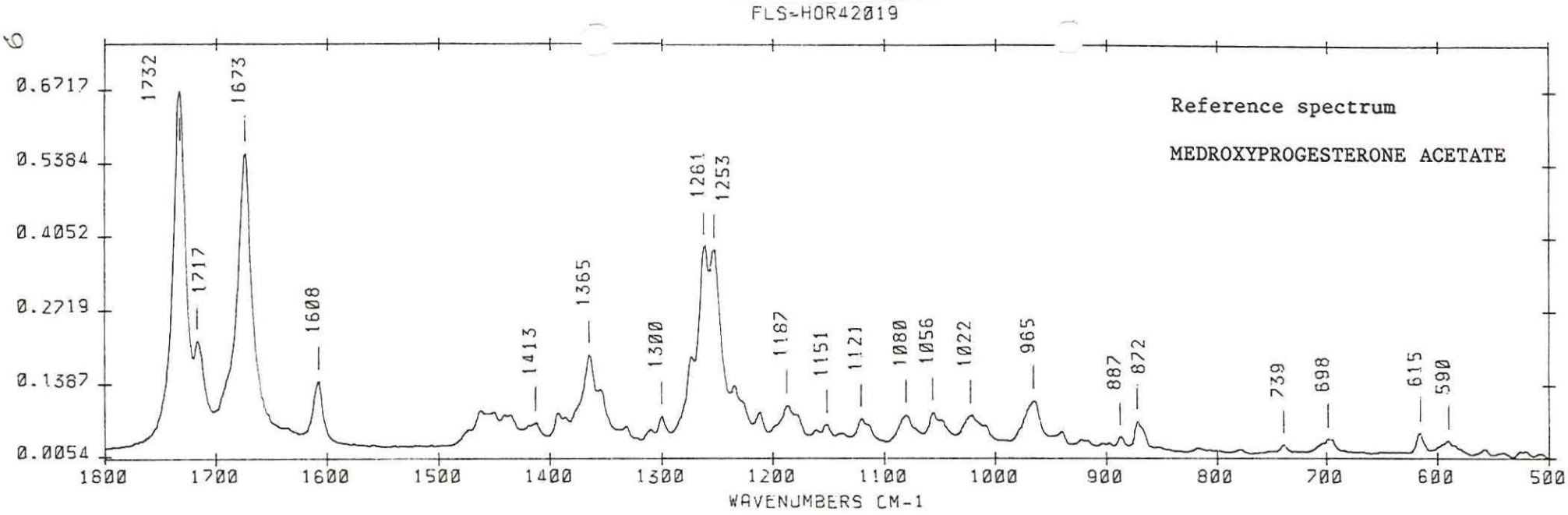
ADEQUATE PEAKS OF REFERENCE FILE:
HOR42019.APKL  MEDROXYPROGESTERONE-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42098.APKL

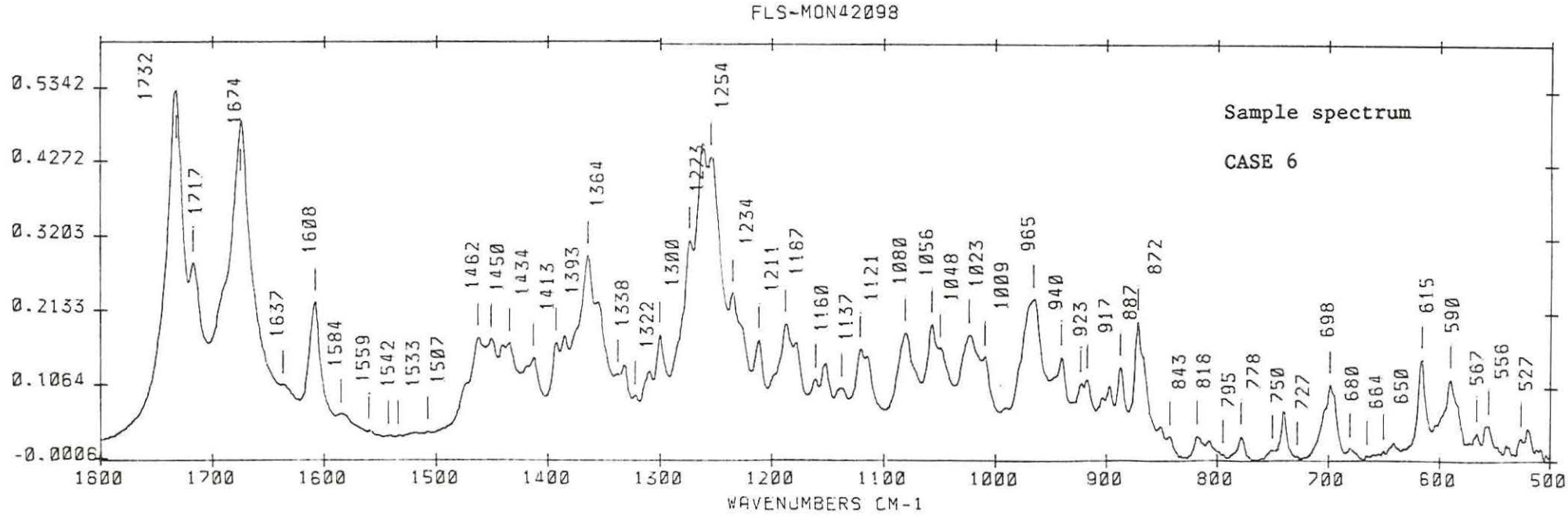
| REF | SAMP |
|---|---|
| 965.312 | 965.318 |
| 1055.962 | 1055.968 |
| 1080.071 | 1080.077 |
| 1187.115 | 1187.120 |
| 1252.691 | 1253.661 |
| 1261.370 | 1261.375 |
| 1364.556 | 1363.597 |
| 1607.574 | 1607.579 |
| 1673.151 | 1674.120 |
| 1716.547 | 1716.551 |
| 1731.977 | 1731.981 |

NUMBER OF MATCHES : 11
NUMBER OF PEAKS IN REF TABLE : 11
SCORE (% OF MATCHES): 100

Conclusion: presence of medroxyprogesterone acetate confirmed

6


FLS-HOR42019
Reference spectrum
MEDROXYPROGESTERONE ACETATE
0.6717
0.5384
0.4052
0.2719
0.1387
0.0054
1732
1717
1673
1608
1413
1365
1300
1261
1253
1187
1151
1121
1080
1056
1022
965
887
872
739
698
615
590
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42098
Sample spectrum
CASE 6
0.5342
0.4272
0.3203
0.2133
0.1064
-0.0006
1732
1717
1674
1637
1608
1584
1559
1542
1533
1507
1462
1450
1434
1413
1393
1364
1338
1322
1300
1274
1254
1234
1211
1187
1160
1137
1121
1080
1056
1048
1023
1009
965
940
923
917
887
872
843
818
795
778
750
727
698
680
664
650
615
590
567
556
527
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

CASE 07
SAMPLE FILE : MON42123
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42123.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
61 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 518.821 | 11 | 19 |
| 2 | 556.431 | 27 | 14 |
| 3 | 577.647 | 13 | 14 |
| 4 | 603.685 | 25 | 23 |
| 5 | 622.008 | 22 | 19 |
| 6 | 656.724 | 25 | 28 |
| 7 | 695.299 | 36 | 22 |
| 8 | 718.443 | 9 | 37 |
| 9 | 732.908 | 12 | 24 |
| 10 | 745.445 | 14 | 26 |
| 11 | 763.768 | 41 | 15 |
| 12 | 774.376 | 45 | 41 |
| 13 | 779.198 | 46 | 33 |
| 14 | 788.841 | 43 | 14 |
| 15 | 823.558 | 20 | 42 |
| 16 | 865.025 | 43 | 32 |
| 17 | 874.669 | 42 | 27 |
| 18 | 904.564 | 29 | 32 |
| 19 | 918.065 | 30 | 21 |
| 20 | 953.746 | 37 | 20 |
| 21 | 963.389 | 37 | 52 |
| 22 | 985.570 | 55 | 32 |
| 23 | 1022.215 | 71 | 29 |
| 24 | 1037.609 | 70 | 28 |
| 25 | 1053.075 | 74 | 33 |
| 26 | 1066.576 | 56 | 39 |
| 27 | 1095.506 | 52 | 28 |
| 28 | 1122.508 | 34 | 66 |
| 29 | 1154.332 | 44 | 56 |
| 30 | 1174.583 | 42 | 32 |
| 31 | 1197.728 | 59 | 34 |
| 32 | 1214.122 | 76 | 34 |
| 33 | 1243.053 | 100 | 75 |
| 34 | 1308.629 | 49 | 29 |
| 35 | 1333.702 | 41 | 34 |
| 36 | 1344.310 | 51 | 26 |
| 37 | 1372.276 | 70 | 44 |
| 38 | 1401.207 | 39 | 68 |
| 39 | 1434.959 | 55 | 68 |
| 40 | 1438.817 | 57 | 44 |
| 41 | 1458.104 | 41 | 44 |
| 42 | 1473.534 | 41 | 25 |
| 43 | 1491.856 | 24 | 48 |
| 44 | 1497.643 | 23 | 36 |
| 45 | 1500.536 | 23 | 37 |
| 46 | 1511.144 | 23 | 29 |
| 47 | 1514.037 | 23 | 44 |
| 48 | 1518.858 | 23 | 21 |
| 49 | 1537.181 | 30 | 50 |
| 50 | 1556.468 | 43 | 52 |
| 51 | 1573.827 | 76 | 32 |
| 52 | 1577.684 | 75 | 37 |
| 53 | 1615.294 | 37 | 47 |
| 54 | 1660.619 | 97 | 50 |
| 55 | 1664.476 | 98 | 41 |
| 56 | 1686.656 | 52 | 50 |
| 57 | 1697.264 | 46 | 27 |
| 58 | 1737.767 | 97 | 41 |
| 59 | 1782.127 | 26 | 58 |
| 60 | 1786.949 | 26 | 62 |
| 61 | 1794.644 | 34 | 47 |

NAME OF SAMPLE FILE : MON42123
LIBRARY NAME : HURLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42123.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 25 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 20 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 13 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 19 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 19 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 13 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 25 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 16 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 17 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 14 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 5 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 0 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 25 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 23 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 6 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 30 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 0 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 80 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 21 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 23 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 7 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42123.APKL

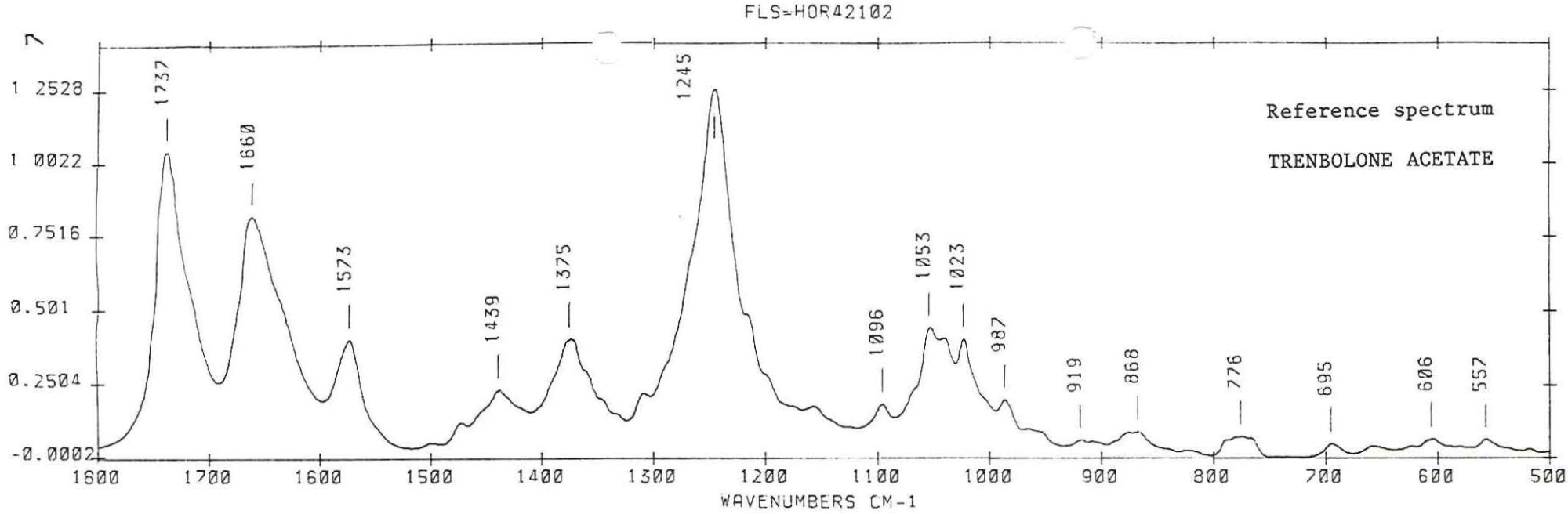
| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1095.506 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1659.653 | 1660.619 |
| 1736.802 | 1737.767 |

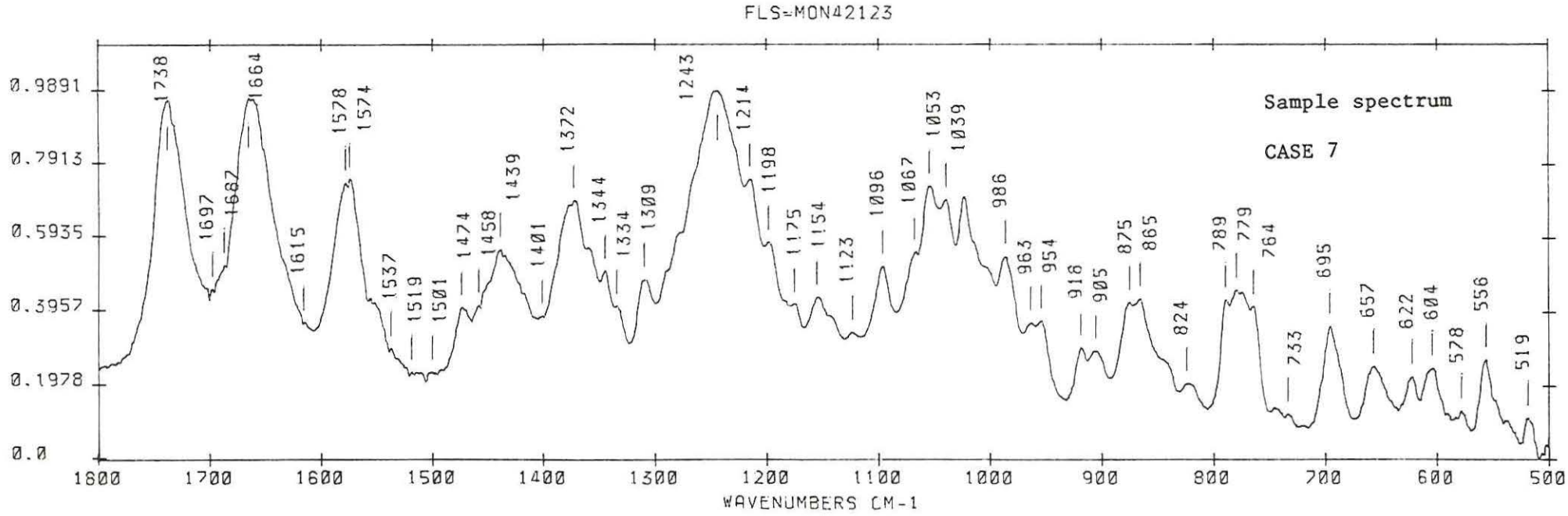
NUMBER OF MATCHES : 8
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 80

Mismatches

| REF | SAMPLE |
|---|---|
| 1245 | peak present at 1243 $cm^{-1}$ |
| 1375 | peak present as double, maximum at 1372 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS=HOR42102
Reference spectrum
TRENBOLONE ACETATE
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
1 2528
1 0022
0.7516
0.501
0.2504
-0.0002
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS=MON42123
Sample spectrum
CASE 7
1738
1697
1682
1664
1615
1578
1574
1537
1519
1501
1474
1458
1439
1401
1372
1344
1334
1309
1243
1214
1198
1175
1154
1123
1096
1067
1053
1039
986
963
954
916
905
875
865
824
789
779
764
733
695
657
622
604
578
556
519
0.9891
0.7913
0.5935
0.3957
0.1978
0.0
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

8

CASE 08
SAMPLE FILE : MON42124
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42124.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
66 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 519.786 | 12 | 8 |
| 2 | 557.396 | 24 | 14 |
| 3 | 578.612 | 13 | 21 |
| 4 | 582.469 | 12 | 16 |
| 5 | 605.613 | 23 | 21 |
| 6 | 616.221 | 14 | 25 |
| 7 | 622.008 | 19 | 22 |
| 8 | 639.366 | 15 | 15 |
| 9 | 656.724 | 23 | 31 |
| 10 | 695.299 | 32 | 22 |
| 11 | 717.479 | 10 | 21 |
| 12 | 733.873 | 12 | 37 |
| 13 | 743.445 | 14 | 38 |
| 14 | 749.302 | 13 | 33 |
| 15 | 763.768 | 37 | 16 |
| 16 | 774.376 | 40 | 56 |
| 17 | 779.198 | 41 | 33 |
| 18 | 788.841 | 38 | 14 |
| 19 | 821.629 | 18 | 42 |
| 20 | 865.990 | 38 | 33 |
| 21 | 874.669 | 37 | 27 |
| 22 | 906.492 | 25 | 46 |
| 23 | 918.065 | 26 | 21 |
| 24 | 953.746 | 32 | 21 |
| 25 | 962.425 | 31 | 58 |
| 26 | 985.570 | 47 | 31 |
| 27 | 1002.928 | 44 | 50 |
| 28 | 1022.215 | 64 | 23 |
| 29 | 1039.574 | 63 | 31 |
| 30 | 1054.039 | 67 | 23 |
| 31 | 1065.611 | 48 | 41 |
| 32 | 1095.506 | 44 | 25 |
| 33 | 1122.508 | 26 | 59 |
| 34 | 1153.368 | 35 | 55 |
| 35 | 1174.583 | 34 | 30 |
| 36 | 1198.692 | 50 | 36 |
| 37 | 1214.122 | 68 | 29 |
| 38 | 1244.981 | 100 | 62 |
| 39 | 1309.593 | 41 | 25 |
| 40 | 1344.310 | 42 | 28 |
| 41 | 1372.276 | 62 | 34 |
| 42 | 1376.134 | 61 | 37 |
| 43 | 1401.207 | 32 | 29 |
| 44 | 1434.959 | 46 | 63 |
| 45 | 1438.817 | 48 | 39 |
| 46 | 1458.104 | 34 | 39 |
| 47 | 1474.498 | 34 | 23 |
| 48 | 1491.856 | 20 | 48 |
| 49 | 1497.643 | 20 | 39 |
| 50 | 1500.536 | 20 | 46 |
| 51 | 1514.037 | 20 | 73 |
| 52 | 1518.858 | 20 | 22 |
| 53 | 1537.181 | 25 | 52 |
| 54 | 1552.611 | 35 | 36 |
| 55 | 1555.504 | 36 | 24 |
| 56 | 1573.827 | 67 | 27 |
| 57 | 1577.684 | 67 | 33 |
| 58 | 1615.294 | 32 | 42 |
| 59 | 1633.617 | 48 | 44 |
| 60 | 1664.476 | 93 | 44 |
| 61 | 1685.692 | 44 | 50 |
| 62 | 1697.264 | 38 | 23 |
| 63 | 1737.767 | 91 | 35 |
| 64 | 1774.413 | 24 | 62 |
| 65 | 1786.949 | 22 | 56 |
| 66 | 1794.664 | 21 | 27 |

NAME OF SAMPLE FILE : MON42124
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42124.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 22 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 25 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 23 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 19 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 22 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 13 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 25 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 13 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 14 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 21 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 0 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 17 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 6 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 7 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 0 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 0 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 90 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 26 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 17 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 28 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 7 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42124.APKL

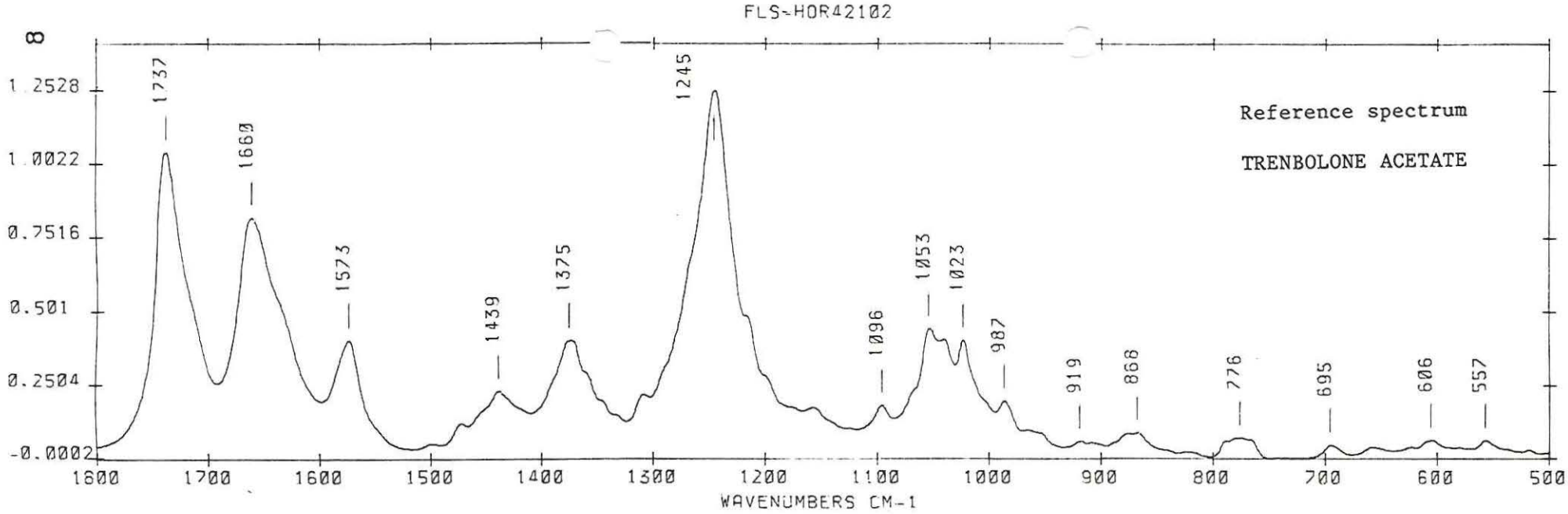
| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1054.039 |
| 1095.505 | 1095.506 |
| 1244.980 | 1244.981 |
| 1375.168 | 1376.134 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1736.802 | 1737.767 |

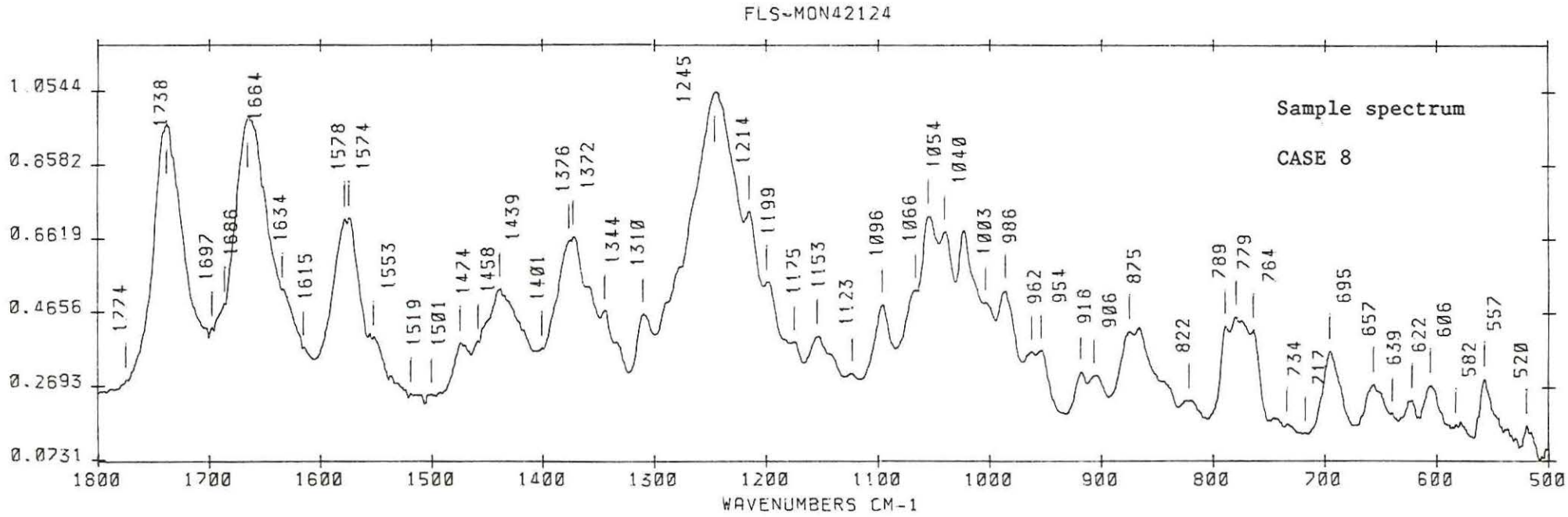
NUMBER OF MATCHES : 9
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 90

Mismatch

| REF | SAMPLE |
|---|---|
| 1660 | broad peak, maximum at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS-HOR42102
8
1.2528
1.0022
0.7516
0.501
0.2504
-0.0002
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
Reference spectrum
TRENBOLONE ACETATE
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42124
1.0544
0.8582
0.6619
0.4656
0.2693
0.0731
1774
1738
1697
1686
1664
1634
1615
1578
1574
1553
1519
1501
1474
1458
1439
1401
1376
1372
1344
1310
1245
1214
1199
1175
1153
1123
1096
1066
1054
1040
1003
986
962
954
916
906
875
822
789
779
764
734
717
695
657
639
622
606
582
557
520
Sample spectrum
CASE 8
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

CASE 09
SAMPLE FILE : MON42125
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42125.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
64 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 519.786 | 13 | 6 |
| 2 | 557.396 | 26 | 13 |
| 3 | 578.612 | 12 | 19 |
| 4 | 582.469 | 11 | 11 |
| 5 | 591.148 | 12 | 14 |
| 6 | 595.006 | 15 | 5 |
| 7 | 605.613 | 24 | 20 |
| 8 | 616.221 | 13 | 18 |
| 9 | 622.008 | 19 | 18 |
| 10 | 630.687 | 14 | 21 |
| 11 | 640.330 | 15 | 15 |
| 12 | 650.938 | 22 | 16 |
| 13 | 656.724 | 24 | 21 |
| 14 | 695.299 | 35 | 22 |
| 15 | 717.479 | 9 | 12 |
| 16 | 732.908 | 12 | 19 |
| 17 | 738.695 | 12 | 9 |
| 18 | 746.409 | 14 | 25 |
| 19 | 749.302 | 13 | 20 |
| 20 | 763.768 | 39 | 15 |
| 21 | 773.411 | 42 | 40 |
| 22 | 779.198 | 43 | 31 |
| 23 | 787.877 | 41 | 15 |
| 24 | 818.736 | 19 | 23 |
| 25 | 824.522 | 19 | 27 |
| 26 | 865.990 | 40 | 35 |
| 27 | 874.669 | 39 | 35 |
| 28 | 906.492 | 27 | 41 |
| 29 | 918.065 | 27 | 21 |
| 30 | 952.782 | 34 | 18 |
| 31 | 962.425 | 34 | 56 |
| 32 | 985.570 | 50 | 31 |
| 33 | 1002.928 | 47 | 51 |
| 34 | 1022.215 | 67 | 23 |
| 35 | 1039.574 | 65 | 31 |
| 36 | 1053.075 | 70 | 29 |
| 37 | 1066.576 | 49 | 35 |
| 38 | 1095.506 | 45 | 26 |
| 39 | 1123.473 | 35 | 36 |
| 40 | 1154.332 | 37 | 47 |
| 41 | 1174.583 | 36 | 27 |
| 42 | 1197.728 | 53 | 31 |
| 43 | 1214.122 | 71 | 31 |
| 44 | 1243.053 | 100 | 60 |
| 45 | 1276.805 | 55 | 44 |
| 46 | 1308.629 | 43 | 27 |
| 47 | 1344.310 | 45 | 45 |
| 48 | 1372.276 | 64 | 42 |
| 49 | 1401.207 | 33 | 31 |
| 50 | 1438.817 | 50 | 56 |
| 51 | 1458.104 | 37 | 27 |
| 52 | 1474.498 | 36 | 21 |
| 53 | 1497.643 | 21 | 73 |
| 54 | 1509.215 | 21 | 21 |
| 55 | 1518.858 | 21 | 58 |
| 56 | 1537.181 | 26 | 46 |
| 57 | 1552.611 | 37 | 37 |
| 58 | 1573.827 | 69 | 28 |
| 59 | 1577.684 | 69 | 33 |
| 60 | 1663.512 | 94 | 45 |
| 61 | 1697.264 | 40 | 26 |
| 62 | 1737.767 | 92 | 36 |
| 63 | 1786.949 | 23 | 53 |
| 64 | 1793.700 | 23 | 83 |

NAME OF SAMPLE FILE : MON42125
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42125.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 25 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 20 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 14 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 9 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 10 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 21 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 14 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 14 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 0 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 16 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 6 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 0 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 0 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 70 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 21 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 5 | 17 | HOR42003.APKL | DIENESTROL |
| 0 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 7 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE AON42125.APKL

| REF | SAMP |
|---|---|
| 986.333 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1095.506 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1736.802 | 1737.767 |

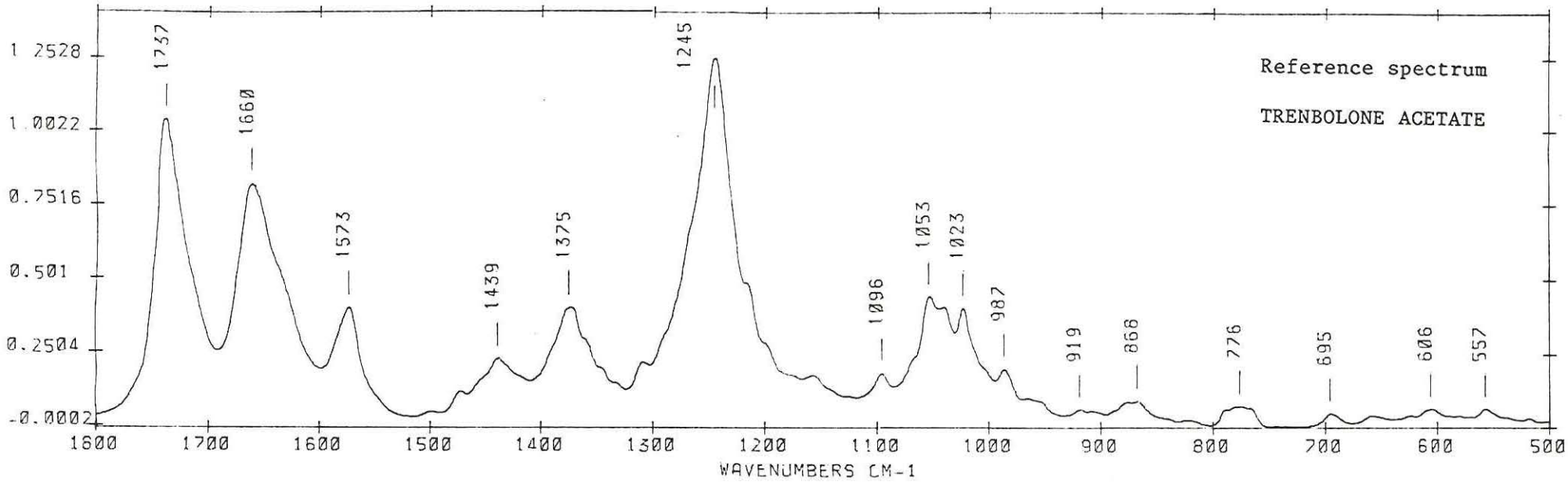
NUMBER OF MATCHES : 7
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 70

Mismatches

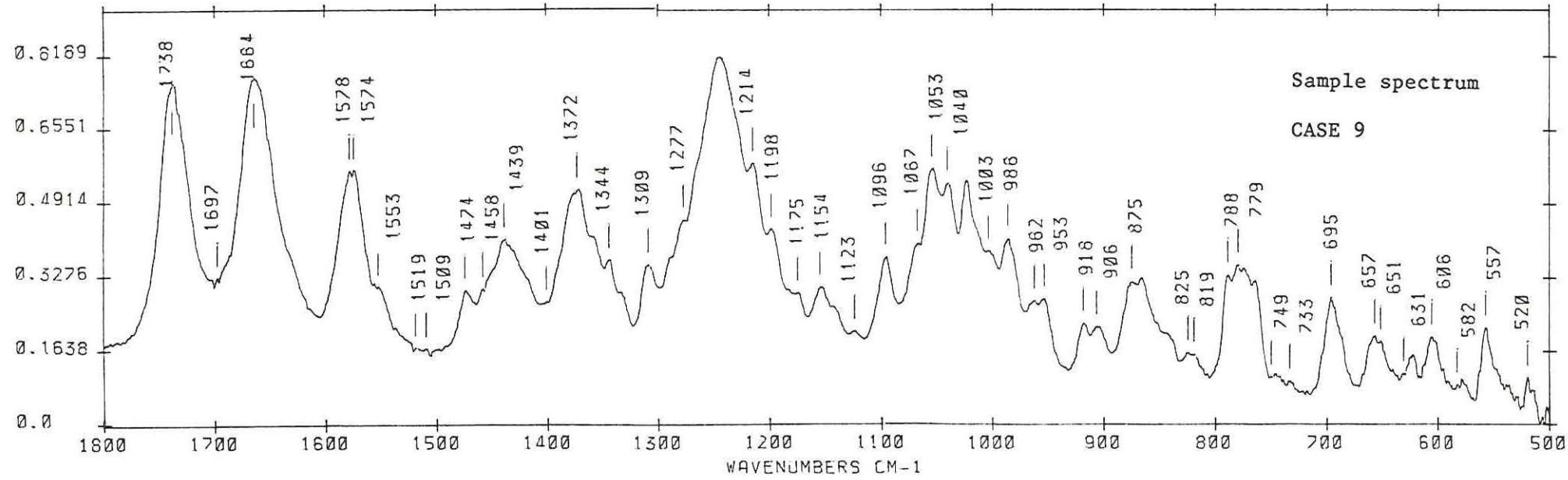
| REF | SAMPLE |
|---|---|
| 1245 | peak present at 1243 $cm^{-1}$ |
| 1375 | peak present as double, maximum at 1372 $cm^{-1}$ |
| 1660 | peak present, maximum at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed

FLS-HOR42102




FLS-MON42125



CASE 10
10 SAMPLE FILE : MON42126
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADEQ. PEAK TABLE: MON42126.AFKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
75 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 518.821 | 11 | 8 |
| 2 | 556.431 | 25 | 16 |
| 3 | 578.612 | 12 | 13 |
| 4 | 605.613 | 22 | 21 |
| 5 | 622.972 | 18 | 18 |
| 6 | 657.689 | 22 | 28 |
| 7 | 695.299 | 31 | 20 |
| 8 | 732.908 | 9 | 26 |
| 9 | 742.552 | 10 | 34 |
| 10 | 763.768 | 36 | 14 |
| 11 | 779.198 | 40 | 55 |
| 12 | 787.877 | 37 | 14 |
| 13 | 824.522 | 15 | 41 |
| 14 | 865.990 | 37 | 29 |
| 15 | 874.669 | 36 | 23 |
| 16 | 906.492 | 23 | 38 |
| 17 | 918.065 | 24 | 19 |
| 18 | 953.746 | 30 | 19 |
| 19 | 962.425 | 29 | 54 |
| 20 | 986.534 | 47 | 32 |
| 21 | 1022.215 | 65 | 23 |
| 22 | 1038.609 | 64 | 23 |
| 23 | 1053.075 | 68 | 27 |
| 24 | 1095.506 | 43 | 23 |
| 25 | 1123.473 | 23 | 52 |
| 26 | 1153.368 | 34 | 45 |
| 27 | 1174.583 | 32 | 26 |
| 28 | 1197.728 | 50 | 29 |
| 29 | 1215.086 | 69 | 34 |
| 30 | 1244.017 | 100 | 62 |
| 31 | 1308.629 | 40 | 21 |
| 32 | 1344.310 | 41 | 25 |
| 33 | 1358.775 | 48 | 33 |
| 34 | 1371.312 | 63 | 28 |
| 35 | 1376.134 | 61 | 35 |
| 36 | 1401.207 | 30 | 34 |
| 37 | 1417.601 | 35 | 34 |
| 38 | 1434.959 | 45 | 56 |
| 39 | 1438.817 | 47 | 24 |
| 40 | 1449.425 | 39 | 29 |
| 41 | 1460.033 | 31 | 19 |
| 42 | 1469.676 | 31 | 23 |
| 43 | 1474.498 | 31 | 21 |
| 44 | 1492.821 | 16 | 10 |
| 45 | 1497.643 | 15 | 12 |
| 46 | 1500.536 | 16 | 15 |
| 47 | 1511.144 | 15 | 10 |
| 48 | 1514.037 | 15 | 14 |
| 49 | 1518.858 | 15 | 5 |
| 50 | 1523.680 | 16 | 4 |
| 51 | 1530.431 | 19 | 21 |
| 52 | 1537.181 | 21 | 12 |
| 53 | 1552.611 | 33 | 28 |
| 54 | 1555.504 | 33 | 14 |
| 55 | 1573.827 | 68 | 25 |
| 56 | 1577.684 | 67 | 35 |
| 57 | 1614.330 | 29 | 25 |
| 58 | 1633.617 | 45 | 33 |
| 59 | 1650.975 | 74 | 19 |
| 60 | 1660.619 | 93 | 32 |
| 61 | 1664.476 | 94 | 31 |
| 62 | 1686.656 | 43 | 41 |
| 63 | 1698.229 | 35 | 6 |
| 64 | 1703.050 | 35 | 10 |
| 65 | 1713.658 | 41 | 39 |
| 66 | 1716.551 | 43 | 15 |
| 67 | 1731.981 | 82 | 30 |
| 68 | 1737.767 | 92 | 28 |
| 69 | 1740.660 | 89 | 23 |
| 70 | 1762.840 | 28 | 25 |
| 71 | 1769.591 | 23 | 12 |
| 72 | 1774.413 | 21 | 34 |
| 73 | 1782.127 | 19 | 29 |
| 74 | 1786.949 | 19 | 27 |

NAME OF SAMPLE FILE : MON42126
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42126.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 25 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 25 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 26 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 30 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 38 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 22 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 13 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 21 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 13 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 14 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 28 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 8 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 17 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 23 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 5 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 17 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 16 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 18 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 30 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 23 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 6 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 36 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 100 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 18 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 18 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 30 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 11 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 20 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

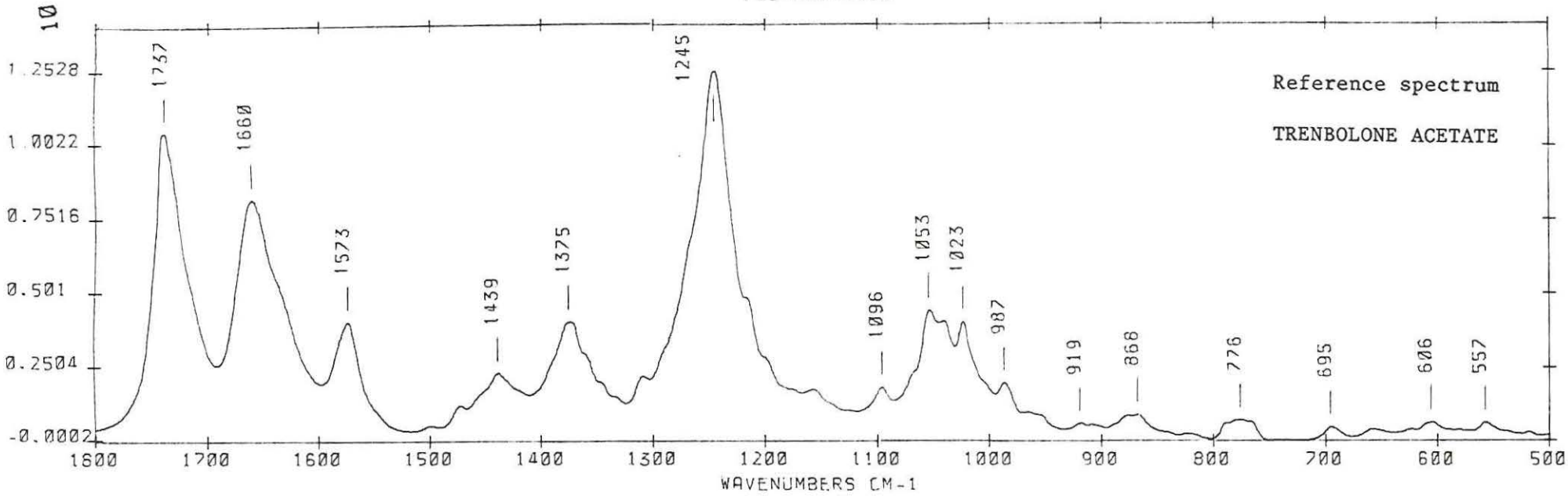
"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

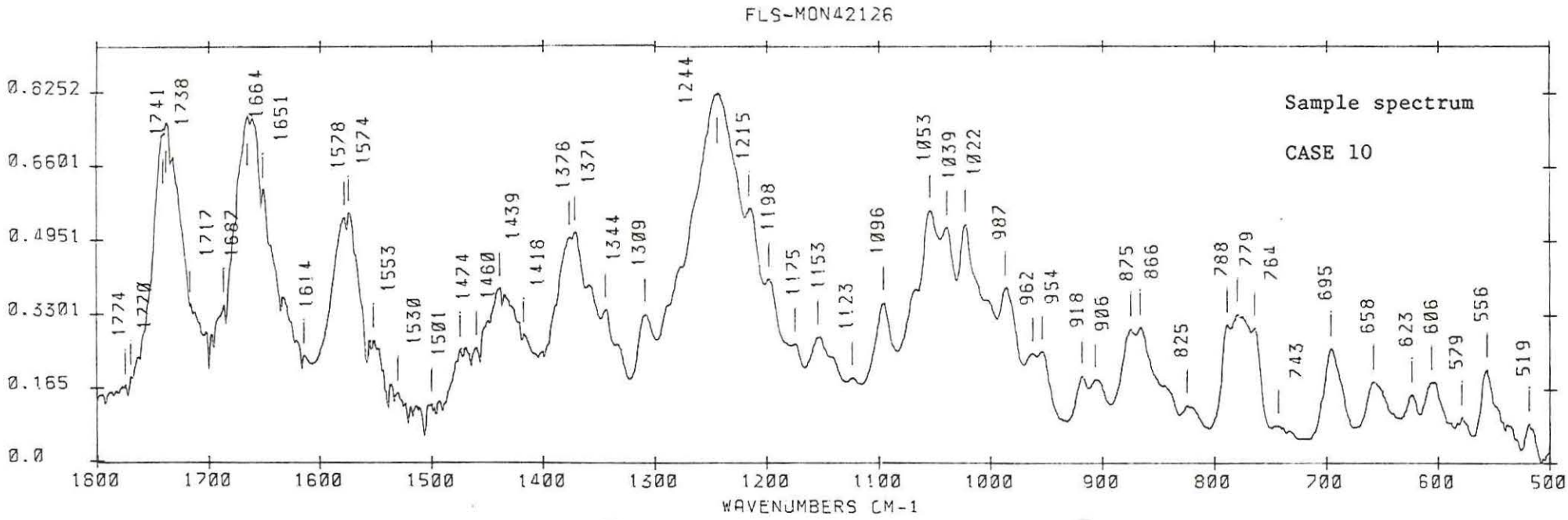
ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42126.APKL

| REF | SAMP |
|---|---|
| 986.533 | 986.534 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1095.506 |
| 1244.980 | 1244.017 |
| 1375.168 | 1376.134 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1659.653 | 1660.619 |
| 1736.802 | 1737.767 |

NUMBER OF MATCHES : 10
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 100

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS-HOR42102
10
1.2528
1.0022
0.7516
0.501
0.2504
-0.0002
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1
Reference spectrum
TRENBOLONE ACETATE


FLS-MON42126
0.8252
0.6601
0.4951
0.3301
0.165
0.0
1774
1720
1741
1738
1717
1682
1664
1651
1614
1578
1574
1553
1530
1501
1474
1460
1439
1416
1376
1371
1344
1309
1244
1215
1198
1175
1153
1123
1096
1053
1039
1022
987
962
954
918
906
875
866
825
788
779
764
743
695
658
623
606
579
556
519
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1
Sample spectrum
CASE 10

CASE 11
SAMPLE FILE : MON42127
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
11 NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42127.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
80 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 506.285 | 4 | 4 |
| 2 | 519.786 | 16 | 10 |
| 3 | 528.465 | 11 | 11 |
| 4 | 539.073 | 13 | 14 |
| 5 | 557.396 | 26 | 12 |
| 6 | 568.968 | 10 | 7 |
| 7 | 578.612 | 14 | 14 |
| 8 | 582.469 | 13 | 10 |
| 9 | 591.148 | 14 | 7 |
| 10 | 595.006 | 17 | 6 |
| 11 | 605.613 | 24 | 19 |
| 12 | 616.221 | 14 | 12 |
| 13 | 622.008 | 20 | 14 |
| 14 | 631.651 | 16 | 10 |
| 15 | 639.366 | 16 | 19 |
| 16 | 650.938 | 22 | 15 |
| 17 | 656.724 | 23 | 19 |
| 18 | 660.582 | 21 | 12 |
| 19 | 667.332 | 14 | 6 |
| 20 | 678.905 | 14 | 11 |
| 21 | 692.406 | 29 | 25 |
| 22 | 695.299 | 32 | 15 |
| 23 | 717.479 | 8 | 8 |
| 24 | 732.908 | 11 | 15 |
| 25 | 742.552 | 11 | 19 |
| 26 | 746.409 | 12 | 8 |
| 27 | 749.302 | 11 | 14 |
| 28 | 763.768 | 35 | 14 |
| 29 | 773.411 | 37 | 34 |
| 30 | 779.198 | 38 | 21 |
| 31 | 788.841 | 35 | 12 |
| 32 | 807.164 | 11 | 8 |
| 33 | 818.736 | 15 | 17 |
| 34 | 824.522 | 16 | 14 |
| 35 | 843.809 | 20 | 30 |
| 36 | 865.990 | 34 | 26 |
| 37 | 870.811 | 32 | 47 |
| 38 | 874.669 | 33 | 29 |
| 39 | 903.599 | 22 | 21 |
| 40 | 906.492 | 22 | 21 |
| 41 | 918.065 | 22 | 19 |
| 42 | 952.782 | 28 | 17 |
| 43 | 962.425 | 28 | 35 |
| 44 | 966.283 | 27 | 27 |
| 45 | 985.570 | 44 | 29 |
| 46 | 1004.857 | 41 | 68 |
| 47 | 1022.215 | 62 | 22 |
| 48 | 1038.609 | 61 | 23 |
| 49 | 1053.075 | 65 | 27 |
| 50 | 1066.576 | 45 | 35 |
| 51 | 1094.542 | 41 | 24 |
| 52 | 1129.259 | 24 | 90 |
| 53 | 1143.724 | 28 | 49 |
| 54 | 1154.332 | 32 | 39 |
| 55 | 1173.619 | 30 | 22 |
| 56 | 1197.728 | 45 | 25 |
| 57 | 1214.122 | 64 | 28 |
| 58 | 1244.017 | 100 | 56 |
| 59 | 1309.593 | 37 | 21 |
| 60 | 1343.346 | 37 | 22 |
| 61 | 1372.276 | 57 | 41 |
| 62 | 1405.064 | 27 | 27 |
| 63 | 1419.530 | 34 | 31 |
| 64 | 1430.138 | 39 | 32 |
| 65 | 1436.888 | 43 | 44 |
| 66 | 1458.104 | 31 | 17 |
| 67 | 1473.534 | 31 | 21 |
| 68 | 1489.928 | 17 | 19 |
| 69 | 1498.607 | 16 | 31 |
| 70 | 1508.250 | 18 | 15 |
| 71 | 1516.930 | 17 | 13 |
| 72 | 1534.288 | 20 | 20 |
| 73 | 1573.827 | 61 | 26 |
| 74 | 1576.720 | 61 | 31 |
| 75 | 1663.512 | 88 | 41 |
| 76 | 1697.264 | 32 | 18 |
| 77 | 1701.122 | 32 | 14 |
| 78 | 1735.838 | 87 | 32 |
| 79 | 178[illegible].914 | 16 | 23 |
| 80 | 17[illegible]75 | 17 | 68 |

NAME OF SAMPLE FILE : MON42127
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42127.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 33 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 20 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 20 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 23 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 28 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 16 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 21 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 18 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 16 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 25 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 7 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 0 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 30 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 6 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 22 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 70 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 9 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 13 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 5 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 20 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE HON42127.APKL

| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1094.542 |
| 1244.980 | 1244.017 |
| 1572.861 | 1573.827 |
| 1736.802 | 1735.838 |

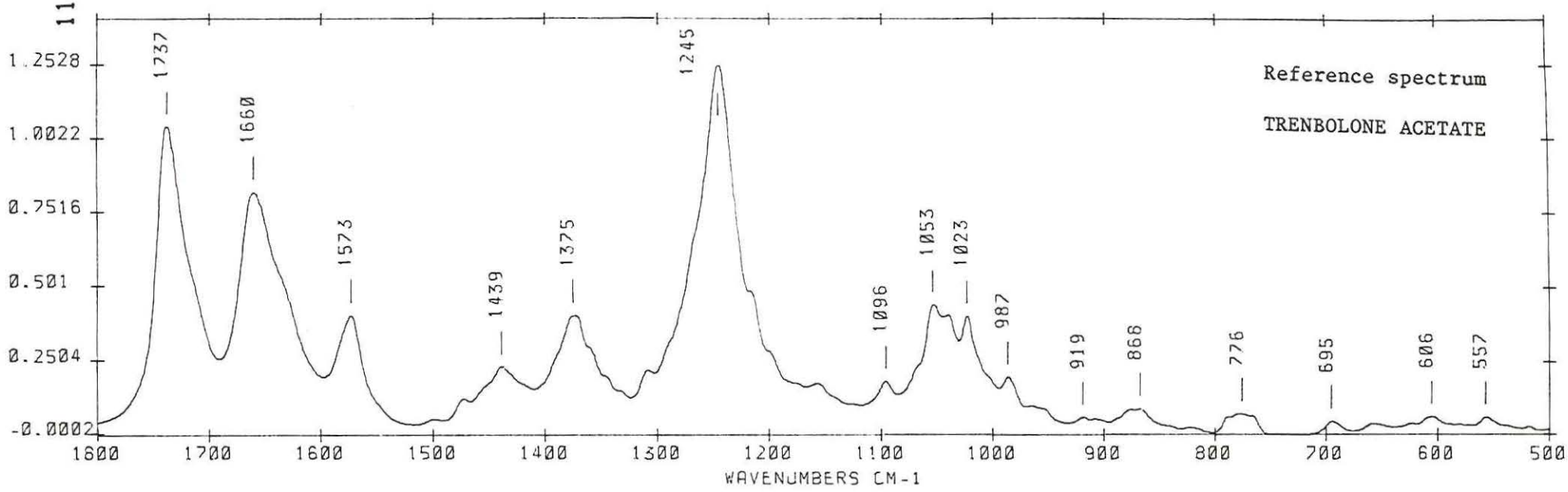
NUMBER OF MATCHES : 7
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 70

Mismatches

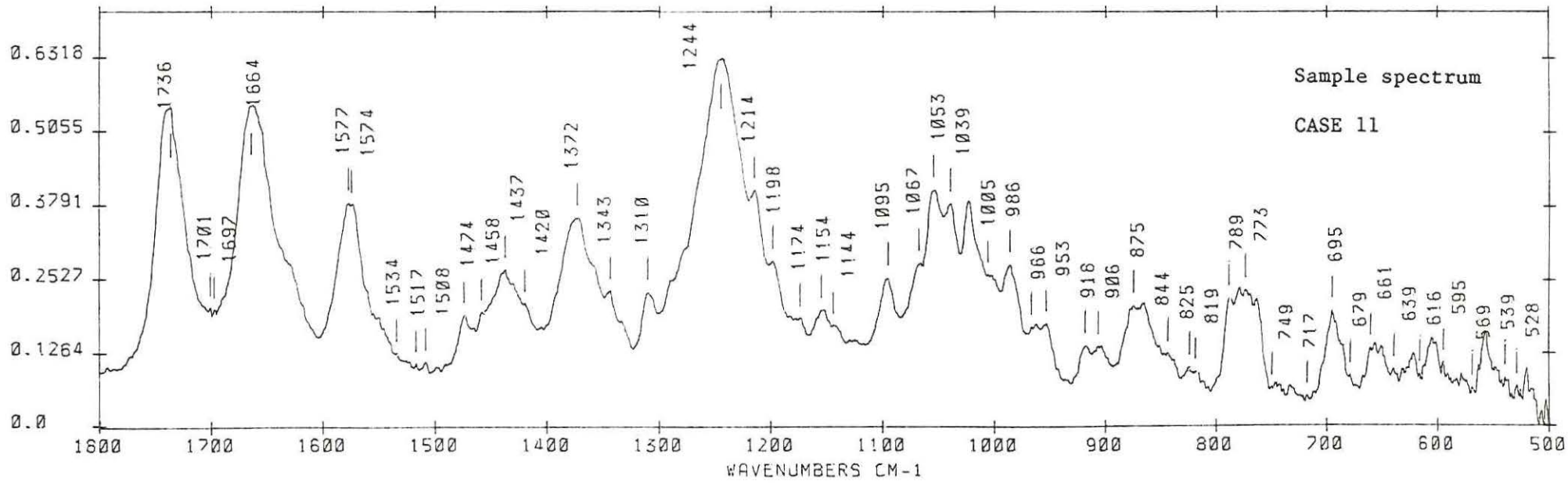
| REF | SAMPLE |
|---|---|
| 1375 | peak present at 1372 $cm^{-1}$ |
| 1439 | peak present, maximum at 1437 $cm^{-1}$ |
| 1660 | peak present, maximum at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17$\beta$-acetate confirmed

FLS-HOR42102




FLS-MON42127



CASE 12
SAMPLE FILE : MON42128
12 SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

[illegible] ADED: PEAK TABLE: MON42128.APKL
SENSITIVITY ORIGINAL PEAK TABLE : 100
78 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 502.427 | 5 | 2 |
| 2 | 519.786 | 11 | 10 |
| 3 | 528.465 | 8 | 13 |
| 4 | 557.396 | 22 | 13 |
| 5 | 578.612 | 11 | 22 |
| 6 | 582.469 | 10 | 10 |
| 7 | 591.148 | 11 | 15 |
| 8 | 595.006 | 13 | 5 |
| 9 | 605.613 | 20 | 20 |
| 10 | 616.221 | 12 | 12 |
| 11 | 622.008 | 16 | 17 |
| 12 | 630.687 | 13 | 12 |
| 13 | 640.330 | 12 | 26 |
| 14 | 650.938 | 18 | 17 |
| 15 | 655.760 | 20 | 20 |
| 16 | 660.582 | 18 | 12 |
| 17 | 667.332 | 11 | 6 |
| 18 | 692.406 | 26 | 21 |
| 19 | 695.299 | 28 | 15 |
| 20 | 717.479 | 7 | 9 |
| 21 | 732.908 | 9 | 18 |
| 22 | 738.695 | 9 | 7 |
| 23 | 746.409 | 10 | 22 |
| 24 | 749.302 | 9 | 14 |
| 25 | 763.768 | 32 | 14 |
| 26 | 774.376 | 34 | 51 |
| 27 | 779.198 | 30 | 29 |
| 28 | 787.877 | 33 | 15 |
| 29 | 807.164 | 10 | 11 |
| 30 | 818.736 | 14 | 17 |
| 31 | 824.522 | 14 | 31 |
| 32 | 844.774 | 18 | 35 |
| 33 | 865.990 | 31 | 26 |
| 34 | 875.633 | 31 | 25 |
| 35 | 904.564 | 20 | 27 |
| 36 | 918.065 | 21 | 19 |
| 37 | 952.782 | 26 | 17 |
| 38 | 962.425 | 26 | 28 |
| 39 | 966.283 | 25 | 27 |
| 40 | 985.570 | 42 | 28 |
| 41 | 1002.928 | 39 | 46 |
| 42 | 1022.215 | 59 | 21 |
| 43 | 1039.574 | 58 | 28 |
| 44 | 1053.075 | 63 | 25 |
| 45 | 1066.576 | 42 | 33 |
| 46 | 1094.542 | 39 | 23 |
| 47 | 1122.508 | 22 | 65 |
| 48 | 1154.332 | 30 | 48 |
| 49 | 1173.619 | 28 | 21 |
| 50 | 1197.728 | 44 | 29 |
| 51 | 1214.122 | 63 | 22 |
| 52 | 1244.017 | 100 | 55 |
| 53 | 1309.593 | 36 | 23 |
| 54 | 1344.310 | 37 | 26 |
| 55 | 1372.276 | 57 | 41 |
| 56 | 1401.207 | 28 | 36 |
| 57 | 1438.817 | 42 | 50 |
| 58 | 1458.104 | 29 | 31 |
| 59 | 1474.498 | 29 | 21 |
| 60 | 1491.856 | 17 | 33 |
| 61 | 1500.536 | 16 | 29 |
| 62 | 1510.179 | 16 | 20 |
| 63 | 1518.858 | 16 | 14 |
| 64 | 1537.181 | 21 | 52 |
| 65 | 1551.646 | 30 | 33 |
| 66 | 1555.504 | 31 | 17 |
| 67 | 1573.827 | 62 | 25 |
| 68 | 1577.684 | 62 | 31 |
| 69 | 1615.294 | 30 | 41 |
| 70 | 1632.652 | 46 | 38 |
| 71 | 1650.975 | 71 | 20 |
| 72 | 1664.476 | 90 | 31 |
| 73 | 1685.692 | 38 | 44 |
| 74 | 1697.264 | 32 | 17 |
| 75 | 1737.767 | 89 | 32 |
| 76 | 1774.413 | 19 | 52 |
| 77 | 1786.949 | 17 | 34 |
| 78 | 1793.700 | 17 | 71 |

NAME OF SAMPLE FILE : MON42128
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42128.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 22 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 25 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 6 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 10 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 23 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 23 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 5 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 13 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 18 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 13 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 28 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 14 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 0 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 17 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 15 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 12 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 0 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 22 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 80 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 9 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 26 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 11 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 7 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
MOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42128.APKL

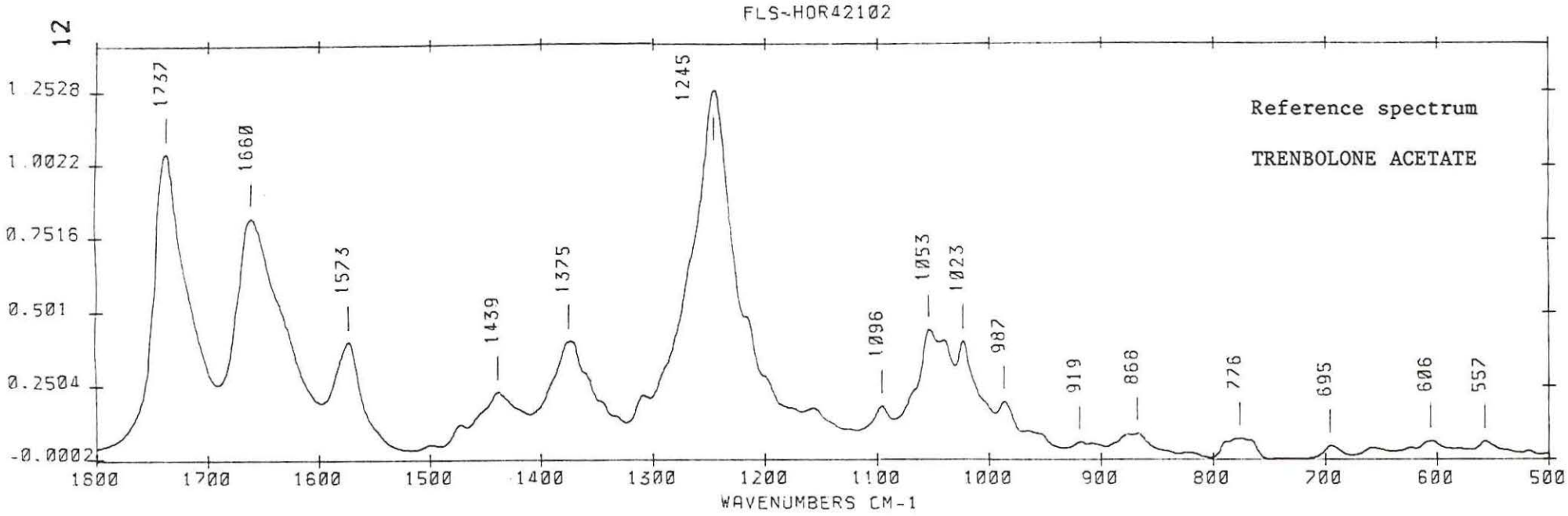
| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1094.542 |
| 1244.980 | 1244.017 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1736.802 | 1737.767 |

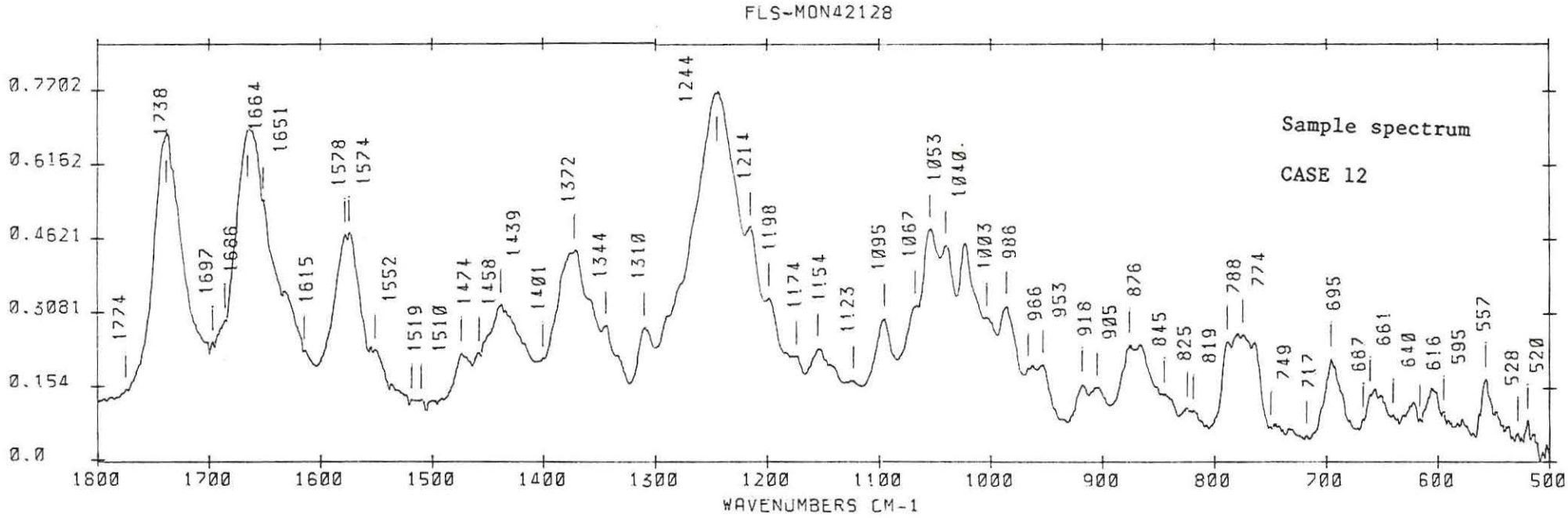
NUMBER OF MATCHES : 8
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 80

Mismatches

| REF | SAMPLE |
|---|---|
| 1375 | present, maximum at 1372 $cm^{-1}$ |
| 1660 | present, maximum at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS-HOR42102
Reference spectrum
TRENBOLONE ACETATE
1.2528
1.0022
0.7516
0.501
0.2504
-0.0002
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42128
Sample spectrum
CASE 12
0.7702
0.6162
0.4621
0.3081
0.154
0.0
1774
1738
1697
1686
1664
1651
1615
1578
1574
1552
1519
1510
1474
1458
1439
1401
1372
1344
1310
1244
1214
1198
1174
1154
1123
1095
1067
1053
1040
1003
986
966
953
918
905
876
845
825
819
788
774
749
717
695
687
661
640
616
595
557
528
520
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

CASE 13
SAMPLE FILE : MON42129
13 SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42129.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
68 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 519.786 | 11 | 6 |
| 2 | 557.396 | 22 | 16 |
| 3 | 578.612 | 11 | 18 |
| 4 | 582.469 | 11 | 10 |
| 5 | 604.649 | 21 | 21 |
| 6 | 616.221 | 13 | 13 |
| 7 | 622.008 | 18 | 17 |
| 8 | 630.687 | 13 | 15 |
| 9 | 640.330 | 13 | 15 |
| 10 | 650.938 | 20 | 17 |
| 11 | 655.760 | 21 | 25 |
| 12 | 695.299 | 30 | 21 |
| 13 | 717.479 | 8 | 10 |
| 14 | 721.336 | 8 | 10 |
| 15 | 733.873 | 10 | 32 |
| 16 | 738.695 | 10 | 10 |
| 17 | 746.409 | 12 | 20 |
| 18 | 763.768 | 34 | 15 |
| 19 | 774.376 | 38 | 48 |
| 20 | 779.198 | 39 | 27 |
| 21 | 788.841 | 16 | 10 |
| 22 | 825.487 | 19 | 40 |
| 23 | 867.918 | 36 | 36 |
| 24 | 874.669 | 35 | 25 |
| 25 | 906.492 | 23 | 42 |
| 26 | 918.065 | 24 | 21 |
| 27 | 952.762 | 30 | 18 |
| 28 | 962.425 | 31 | 44 |
| 29 | 986.534 | 47 | 34 |
| 30 | 1022.215 | 64 | 25 |
| 31 | 1039.574 | 63 | 30 |
| 32 | 1053.075 | 67 | 29 |
| 33 | 1066.576 | 48 | 37 |
| 34 | 1094.542 | 45 | 27 |
| 35 | 1122.508 | 27 | 77 |
| 36 | 1152.403 | 36 | 60 |
| 37 | 1173.619 | 34 | 23 |
| 38 | 1197.728 | 50 | 30 |
| 39 | 1214.122 | 68 | 29 |
| 40 | 1244.017 | 100 | 61 |
| 41 | 1309.593 | 41 | 25 |
| 42 | 1344.310 | 43 | 31 |
| 43 | 1372.276 | 64 | 41 |
| 44 | 1401.207 | 33 | 34 |
| 45 | 1434.959 | 47 | 65 |
| 46 | 1438.817 | 49 | 42 |
| 47 | 1458.104 | 36 | 44 |
| 48 | 1470.641 | 35 | 45 |
| 49 | 1474.498 | 36 | 21 |
| 50 | 1491.856 | 21 | 39 |
| 51 | 1500.536 | 21 | 31 |
| 52 | 1510.179 | 21 | 24 |
| 53 | 1518.858 | 20 | 14 |
| 54 | 1537.181 | 24 | 59 |
| 55 | 1552.611 | 35 | 33 |
| 56 | 1555.504 | 36 | 19 |
| 57 | 1573.827 | 69 | 26 |
| 58 | 1577.684 | 68 | 33 |
| 59 | 1614.330 | 33 | 54 |
| 60 | 1633.617 | 50 | 38 |
| 61 | 1650.975 | 77 | 24 |
| 62 | 1664.476 | 96 | 33 |
| 63 | 1686.656 | 44 | 39 |
| 64 | 1697.264 | 37 | 19 |
| 65 | 1737.767 | 94 | 35 |
| 66 | 1774.413 | 22 | 58 |
| 67 | 1786.949 | 20 | 46 |
| 68 | 1794.664 | 20 | 69 |

NAME OF SAMPLE FILE : MON42129
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42129.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 18 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 12 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 13 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 14 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 14 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 8 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 18 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 3 | 30 | HOR42031.APKL | MESTRANOL |
| 7 | 14 | HOR42015.APKL | ESTRONE |
| 17 | 28 | HOR42014.APKL | ESTRIOL |
| 16 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 14 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 5 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 15 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 18 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 26 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 15 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 6 | 15 | HOR42032.APKL | ETHISTERONE |
| 20 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 80 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 7 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 26 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 17 | 17 | HOR42003.APKL | DIENESTROL |
| 11 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 26 | 15 | HOR42002.APKL | HEXESTROL |
| 0 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 14 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 0 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42129.APKL

| REF | SAMP |
|---|---|
| 986.533 | 986.534 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1095.505 | 1094.542 |
| 1244.980 | 1244.017 |
| 1438.816 | 1438.817 |
| 1572.861 | 1573.827 |
| 1736.802 | 1737.767 |

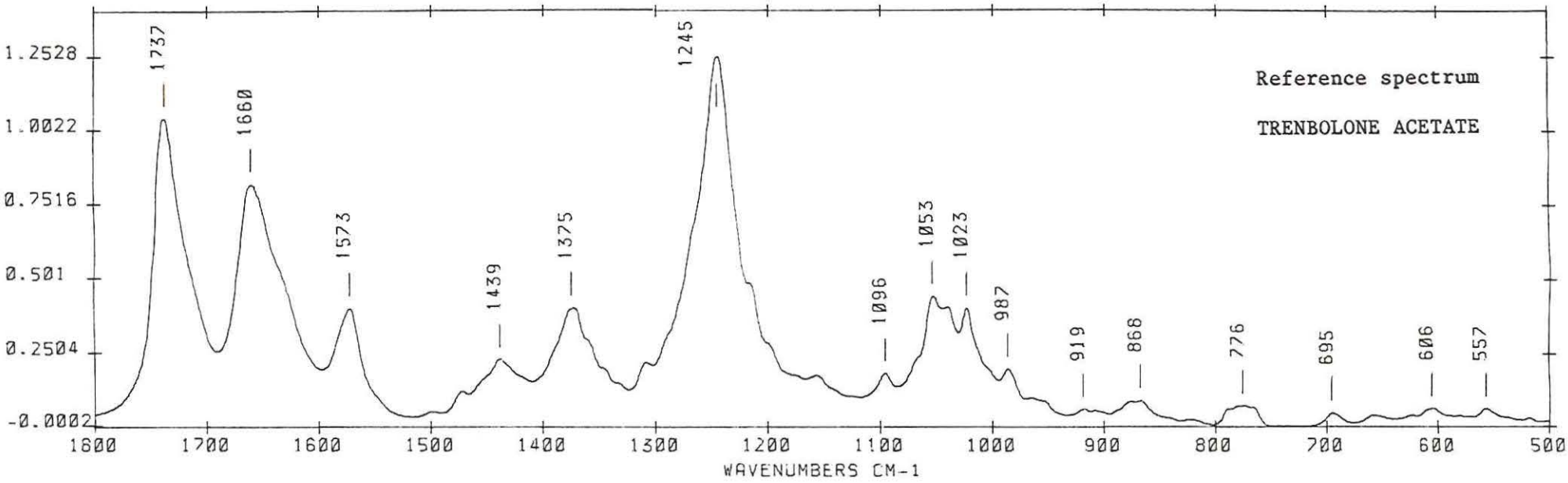
NUMBER OF MATCHES : 8
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 80

Mismatches

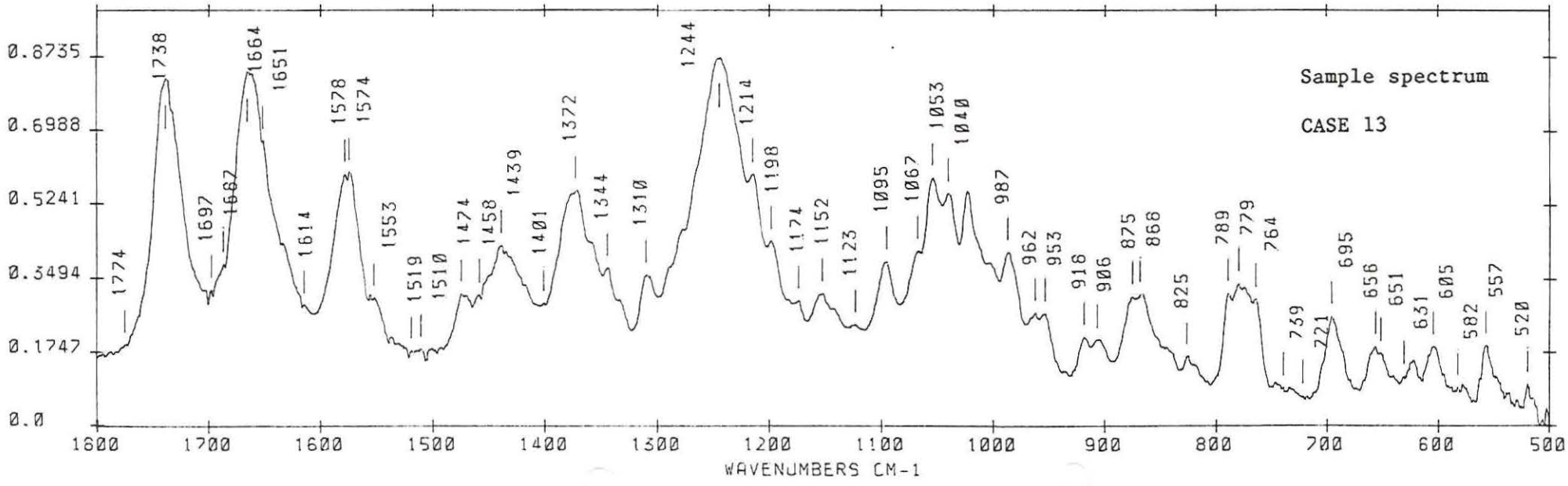
| REF | SAMPLE |
|---|---|
| 1375 | present, maximum at 1372 $cm^{-1}$ |
| 1659 | present, maximum at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed

FLS-HOR42102




FLS-MON42129



CASE 14

14 SAMPLE FILE : MON42130
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42130.AFRL

SENSITIVITY ORIGINAL PEAK TABLE : 100
96 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 502.427 | 13 | 2 |
| 2 | 519.786 | 20 | 13 |
| 3 | 528.465 | 18 | 11 |
| 4 | 539.073 | 18 | 14 |
| 5 | 557.396 | 27 | 9 |
| 6 | 563.182 | 22 | 4 |
| 7 | 578.612 | 19 | 23 |
| 8 | 582.469 | 19 | 17 |
| 9 | 591.148 | 20 | 8 |
| 10 | 595.006 | 23 | 8 |
| 11 | 601.756 | 29 | 19 |
| 12 | 613.328 | 20 | 6 |
| 13 | 622.008 | 23 | 16 |
| 14 | 631.651 | 20 | 10 |
| 15 | 636.473 | 18 | 8 |
| 16 | 639.366 | 19 | 10 |
| 17 | 650.938 | 23 | 9 |
| 18 | 656.724 | 23 | 15 |
| 19 | 661.546 | 23 | 10 |
| 20 | 667.332 | 17 | 8 |
| 21 | 678.905 | 17 | 11 |
| 22 | 685.650 | 21 | 9 |
| 23 | 692.406 | 28 | 11 |
| 24 | 695.299 | 30 | 15 |
| 25 | 711.693 | 11 | 7 |
| 26 | 717.479 | 10 | 8 |
| 27 | 730.015 | 12 | 13 |
| 28 | 742.552 | 11 | 23 |
| 29 | 746.409 | 11 | 6 |
| 30 | 749.302 | 10 | 9 |
| 31 | 763.768 | 29 | 13 |
| 32 | 769.554 | 31 | 12 |
| 33 | 773.411 | 31 | 14 |
| 34 | 779.198 | 32 | 12 |
| 35 | 788.841 | 29 | 12 |
| 36 | 798.485 | 11 | 15 |
| 37 | 807.164 | 9 | 5 |
| 38 | 811.021 | 10 | 6 |
| 39 | 825.487 | 26 | 9 |
| 40 | 838.023 | 15 | 19 |
| 41 | 846.702 | 15 | 27 |
| 42 | 851.524 | 16 | 8 |
| 43 | 865.025 | 27 | 18 |
| 44 | 874.669 | 27 | 29 |
| 45 | 889.134 | 14 | 16 |
| 46 | 903.599 | 18 | 17 |
| 47 | 906.492 | 18 | 10 |
| 48 | 918.065 | 18 | 23 |
| 49 | 935.423 | 15 | 13 |
| 50 | 943.138 | 13 | 15 |
| 51 | 952.782 | 23 | 17 |
| 52 | 962.425 | 23 | 25 |
| 53 | 966.283 | 23 | 23 |
| 54 | 971.104 | 22 | 19 |
| 55 | 985.570 | 39 | 28 |
| 56 | 1004.857 | 39 | 62 |
| 57 | 1022.215 | 60 | 24 |
| 58 | 1038.609 | 59 | 24 |
| 59 | 1053.075 | 63 | 27 |
| 60 | 1066.576 | 45 | 39 |
| 61 | 1098.399 | 45 | 36 |
| 62 | 1116.722 | 28 | 47 |
| 63 | 1129.259 | 28 | 23 |
| 64 | 1143.724 | 28 | 60 |
| 65 | 1154.332 | 31 | 37 |
| 66 | 1172.655 | 27 | 21 |
| 67 | 1183.263 | 27 | 33 |
| 68 | 1215.086 | 59 | 28 |
| 69 | 1244.017 | 100 | 49 |
| 70 | 1309.593 | 34 | 25 |
| 71 | 1375.169 | 65 | 45 |
| 72 | 1405.064 | 29 | 20 |
| 73 | 1419.530 | 34 | 29 |
| 74 | 1430.138 | 38 | 25 |
| 75 | 1436.888 | 41 | 28 |
| 76 | 1455.211 | 34 | 33 |
| 77 | 1458.104 | 35 | 17 |
| 78 | 1473.534 | 40 | 15 |
| 79 | 1489.928 | 21 | 15 |
| 80 | 1498.607 | 20 | 24 |
| 81 | 1507.286 | 23 | 16 |
| 82 | 1516.930 | 23 | 10 |
| 83 | 1522.716 | 24 | 19 |
| 84 | 1533.324 | 25 | 14 |
| 85 | 1545.860 | 28 | 51 |
| 86 | 1549.718 | 30 | 9 |
| 87 | 1554.540 | 31 | 15 |
| 88 | 1577.684 | 58 | 36 |
| 89 | 1636.510 | 64 | 42 |
| 90 | 1663.512 | 85 | 35 |
| 91 | 1696.300 | 31 | 23 |
| 92 | 1701.122 | 31 | 12 |
| 93 | 1739.696 | 82 | 31 |
| 94 | 1772.484 | 15 | 15 |
| 95 | 1787.914 | 11 | 12 |
| 96 | 1792.735 | 12 | 35 |

NAME OF SAMPLE FILE : MON42130
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42130.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 29 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 25 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 13 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 19 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 42 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 27 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 21 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 21 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 28 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 14 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 11 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 16 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 23 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 16 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 25 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 20 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 15 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 0 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 6 | 15 | HOR42032.APKL | ETHISTERONE |
| 13 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 50 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 7 | 14 | HOR42017.APKL | PROGESTERONE |
| 16 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 9 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 21 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 11 | 17 | HOR42003.APKL | DIENESTROL |
| 11 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 26 | 15 | HOR42002.APKL | HEXESTROL |
| 20 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 7 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 23 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42130.APKL

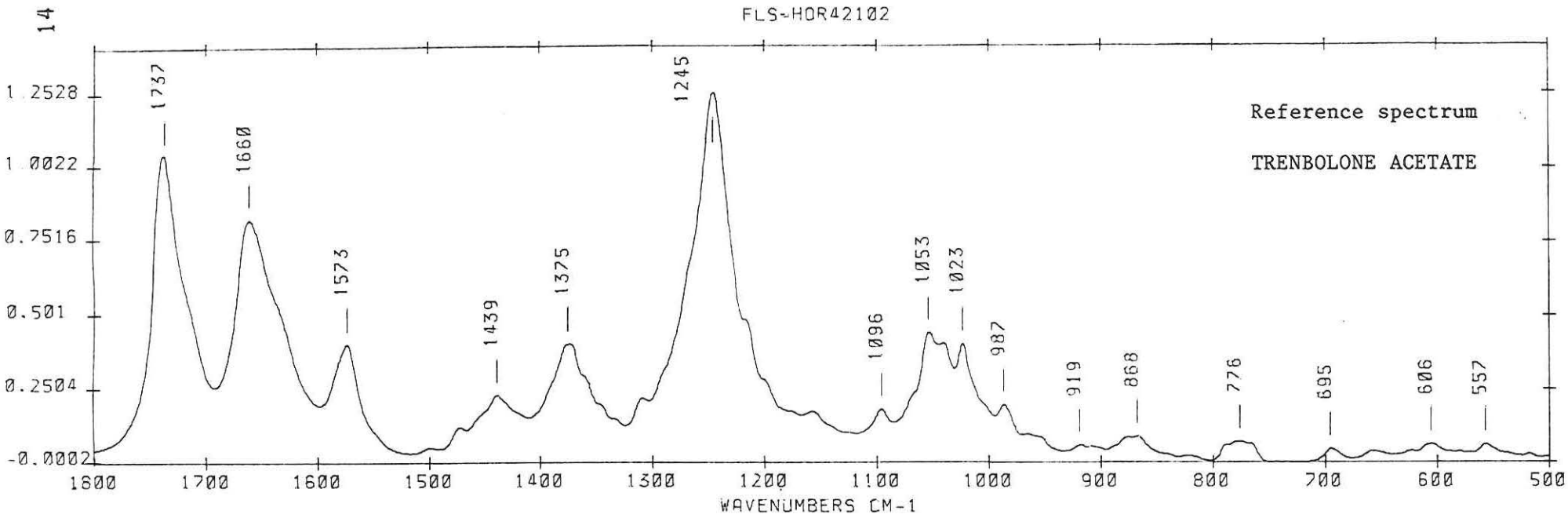
| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1053.075 |
| 1244.980 | 1244.017 |
| 1375.168 | 1375.169 |

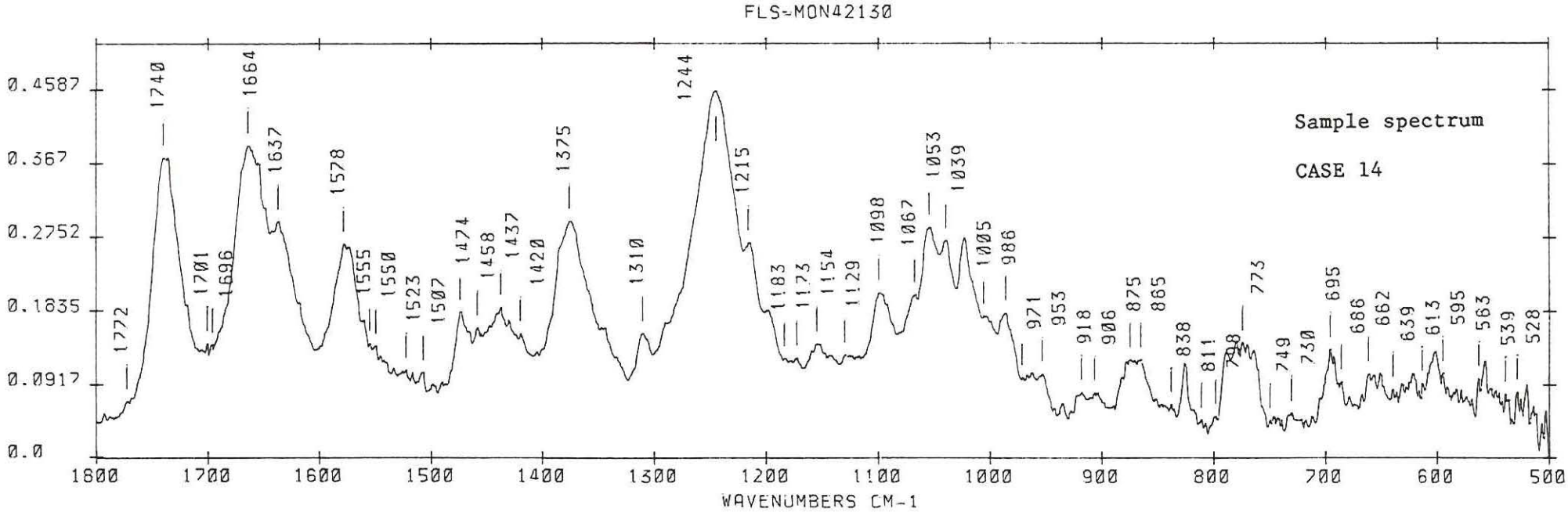
NUMBER OF MATCHES : 5
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 50

Mismatches

| REF | SAMPLE |
|---|---|
| 1096 | present at 1098 $cm^{-1}$ |
| 1439 | present, maximum at 1437 $cm^{-1}$ |
| 1573 | doublet present, maximum at 1578 $cm^{-1}$ |
| 1660 | present at 1664 $cm^{-1}$ |
| 1737 | present at 1740 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS-HOR42102
Reference spectrum
TRENBOLONE ACETATE
1.2528
1.0022
0.7516
0.501
0.2504
-0.0002
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42130
Sample spectrum
CASE 14
0.4587
0.367
0.2752
0.1835
0.0917
0.0
1772
1740
1701
1696
1664
1637
1578
1555
1550
1523
1507
1474
1458
1437
1420
1375
1310
1244
1215
1183
1173
1154
1129
1098
1067
1053
1039
1005
986
971
953
918
906
875
865
838
811
798
773
749
730
695
686
662
639
613
595
563
539
528
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

15 CASE 15

SAMPLE FILE : MON42144
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 100

ADED. PEAK TABLE: MON42144.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
81 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 502.427 | 11 | 2 |
| 2 | 519.786 | 18 | 12 |
| 3 | 528.465 | 13 | 4 |
| 4 | 557.396 | 27 | 14 |
| 5 | 563.182 | 19 | 4 |
| 6 | 578.612 | 16 | 25 |
| 7 | 591.148 | 18 | 8 |
| 8 | 595.006 | 21 | 6 |
| 9 | 605.613 | 27 | 20 |
| 10 | 622.008 | 22 | 18 |
| 11 | 631.651 | 19 | 13 |
| 12 | 636.473 | 18 | 8 |
| 13 | 639.366 | 19 | 11 |
| 14 | 650.938 | 26 | 16 |
| 15 | 656.724 | 27 | 21 |
| 16 | 660.582 | 25 | 14 |
| 17 | 667.332 | 20 | 6 |
| 18 | 678.905 | 19 | 12 |
| 19 | 692.406 | 33 | 17 |
| 20 | 695.299 | 37 | 17 |
| 21 | 710.728 | 14 | 14 |
| 22 | 717.479 | 13 | 9 |
| 23 | 732.908 | 17 | 19 |
| 24 | 742.552 | 17 | 24 |
| 25 | 746.409 | 18 | 9 |
| 26 | 749.302 | 16 | 13 |
| 27 | 763.768 | 40 | 16 |
| 28 | 769.554 | 42 | 11 |
| 29 | 773.411 | 44 | 20 |
| 30 | 779.198 | 45 | 22 |
| 31 | 787.877 | 42 | 15 |
| 32 | 807.164 | 18 | 9 |
| 33 | 818.736 | 23 | 25 |
| 34 | 824.522 | 22 | 24 |
| 35 | 844.774 | 27 | 45 |
| 36 | 867.918 | 41 | 39 |
| 37 | 875.633 | 41 | 29 |
| 38 | 903.599 | 29 | 25 |
| 39 | 906.492 | 29 | 27 |
| 40 | 918.065 | 30 | 25 |
| 41 | 952.782 | 36 | 20 |
| 42 | 962.425 | 36 | 39 |
| 43 | 966.283 | 35 | 35 |
| 44 | 985.570 | 52 | 34 |
| 45 | 1001.964 | 49 | 45 |
| 46 | 1022.215 | 68 | 26 |
| 47 | 1038.609 | 67 | 27 |
| 48 | 1052.110 | 71 | 37 |
| 49 | 1065.611 | 53 | 46 |
| 50 | 1094.542 | 49 | 32 |
| 51 | 1125.401 | 33 | 63 |
| 52 | 1154.332 | 41 | 46 |
| 53 | 1173.619 | 39 | 35 |
| 54 | 1198.692 | 55 | 35 |
| 55 | 1214.122 | 72 | 33 |
| 56 | 1244.017 | 100 | 68 |
| 57 | 1309.593 | 46 | 27 |
| 58 | 1343.346 | 47 | 26 |
| 59 | 1374.205 | 65 | 50 |
| 60 | 1405.064 | 36 | 26 |
| 61 | 1419.530 | 43 | 27 |
| 62 | 1430.138 | 49 | 26 |
| 63 | 1436.888 | 53 | 48 |
| 64 | 1458.104 | 42 | 15 |
| 65 | 1464.854 | 37 | 40 |
| 66 | 1473.534 | 41 | 25 |
| 67 | 1489.928 | 27 | 21 |
| 68 | 1498.607 | 26 | 30 |
| 69 | 1507.286 | 27 | 17 |
| 70 | 1516.930 | 26 | 12 |
| 71 | 1522.716 | 27 | 11 |
| 72 | 1533.324 | 29 | 0 |
| 73 | 1545.860 | 36 | 30 |
| 74 | 1554.540 | 42 | 42 |
| 75 | 1572.862 | 69 | 27 |
| 76 | 1576.720 | 70 | 39 |
| 77 | 1663.512 | 92 | 50 |
| 78 | 1697.264 | 44 | 22 |
| 79 | 1701.122 | 45 | 13 |
| 80 | 1735.838 | 92 | 38 |
| 81 | 1792.735 | 26 | 66 |

NAME OF SAMPLE FILE : MON42144
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42144.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 25 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 16 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 23 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 19 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 28 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 12 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 20 | 30 | HOR42031.APKL | NESTRANOL |
| 28 | 14 | HOR42015.APKL | ESTRONE |
| 17 | 28 | HOR42014.APKL | ESTRIOL |
| 11 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 7 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 0 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 5 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 5 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 5 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 16 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 18 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 23 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 22 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 10 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 30 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 6 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 20 | 15 | HOR42032.APKL | ETHISTERONE |
| 13 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 80 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 7 | 14 | HOR42017.APKL | PROGESTERONE |
| 16 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 9 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 8 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 5 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 20 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 10 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 21 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 0 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42102.APKL  TRENBOLONE-17B-ACETATE
FOUND IN PEAK TABLE OF SAMPLE MON42144.APKL

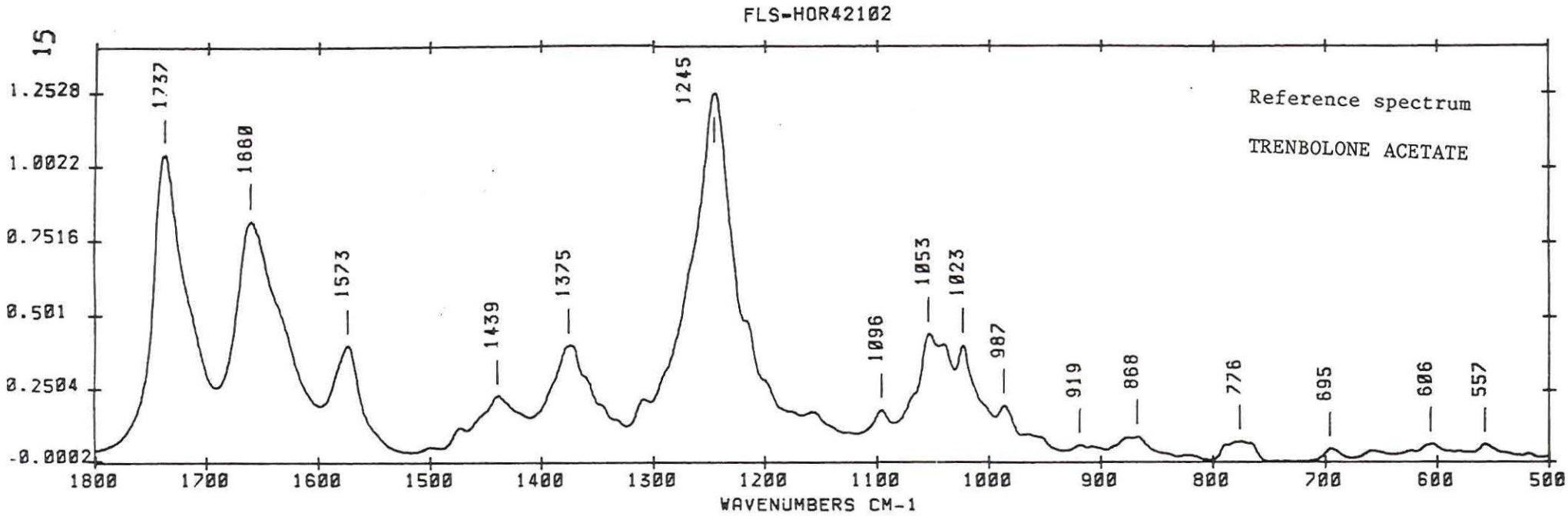
| REF | SAMP |
|---|---|
| 986.533 | 985.570 |
| 1023.178 | 1022.215 |
| 1053.073 | 1052.110 |
| 1095.505 | 1094.542 |
| 1244.980 | 1244.017 |
| 1375.168 | 1374.205 |
| 1572.861 | 1572.862 |
| 1736.802 | 1735.838 |

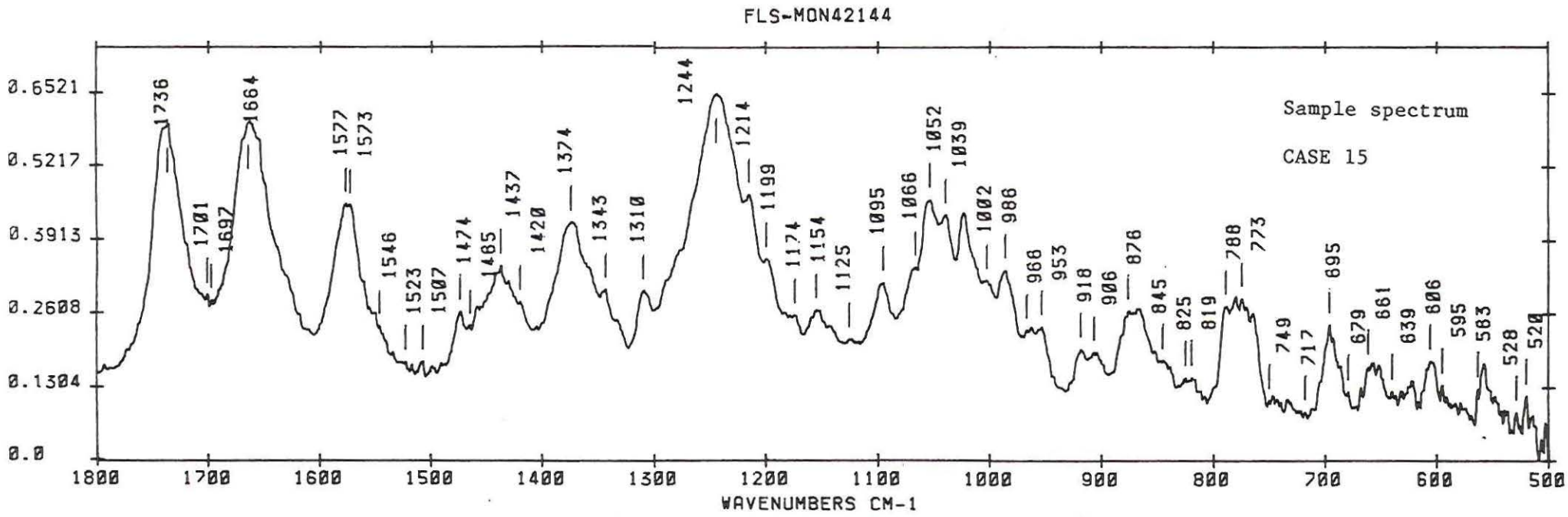
NUMBER OF MATCHES : 8
NUMBER OF PEAKS IN REF TABLE : 10
SCORE (% OF MATCHES): 80

Mismatches

| REF | SAMPLE |
|---|---|
| 1439 | present at 1437 $cm^{-1}$ |
| 1660 | present at 1664 $cm^{-1}$ |

Conclusion: presence of trenbolone-17β-acetate confirmed


FLS-HOR42102
Reference spectrum
TRENBOLONE ACETATE
1.2528
1.0022
0.7516
0.501
0.2504
-0.0002
1737
1660
1573
1439
1375
1245
1096
1053
1023
987
919
868
776
695
606
557
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42144
Sample spectrum
CASE 15
0.6521
0.5217
0.3913
0.2608
0.1304
0.0
1736
1701
1697
1664
1577
1573
1546
1523
1507
1474
1465
1437
1420
1374
1343
1310
1244
1214
1199
1174
1154
1125
1095
1066
1052
1039
1002
986
968
953
918
906
876
845
825
819
788
773
749
717
695
679
661
639
606
595
583
528
520
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

16 CASE 16

SAMPLE FILE : MON42156
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 2000

ADEQ. PEAK TABLE: MON42156.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
75 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 536.180 | 20 | 37 |
| 2 | 574.754 | 6 | 15 |
| 3 | 589.219 | 9 | 39 |
| 4 | 597.899 | 8 | 52 |
| 5 | 611.400 | 12 | 29 |
| 6 | 620.079 | 22 | 7 |
| 7 | 638.402 | 8 | 41 |
| 8 | 641.295 | 8 | 39 |
| 9 | 649.009 | 10 | 14 |
| 10 | 653.831 | 9 | 58 |
| 11 | 660.582 | 9 | 66 |
| 12 | 670.225 | 8 | 21 |
| 13 | 677.940 | 8 | 23 |
| 14 | 700.120 | 10 | 42 |
| 15 | 720.372 | 6 | 15 |
| 16 | 733.873 | 3 | 14 |
| 17 | 737.730 | 3 | 15 |
| 18 | 755.089 | 1 | 6 |
| 19 | 775.340 | 17 | 10 |
| 20 | 817.772 | 10 | 14 |
| 21 | 826.451 | 17 | 14 |
| 22 | 834.166 | 19 | 12 |
| 23 | 853.453 | 26 | 12 |
| 24 | 911.314 | 3 | 20 |
| 25 | 925.780 | 5 | 22 |
| 26 | 981.712 | 9 | 21 |
| 27 | 1014.500 | 10 | 12 |
| 28 | 1045.360 | 29 | 37 |
| 29 | 1086.827 | 29 | 68 |
| 30 | 1102.257 | 32 | 39 |
| 31 | 1120.579 | 39 | 41 |
| 32 | 1170.726 | 20 | 15 |
| 33 | 1205.443 | 32 | 32 |
| 34 | 1247.874 | 29 | 54 |
| 35 | 1285.484 | 15 | 104 |
| 36 | 1306.700 | 26 | 18 |
| 37 | 1332.738 | 29 | 20 |
| 38 | 1358.775 | 30 | 115 |
| 39 | 1364.561 | 29 | 108 |
| 40 | 1397.350 | 47 | 31 |
| 41 | 1406.029 | 48 | 50 |
| 42 | 1414.708 | 47 | 98 |
| 43 | 1421.458 | 47 | 37 |
| 44 | 1438.817 | 30 | 28 |
| 45 | 1453.282 | 33 | 61 |
| 46 | 1460.997 | 33 | 63 |
| 47 | 1466.783 | 32 | 39 |
| 48 | 1474.498 | 29 | 27 |
| 49 | 1477.391 | 28 | 56 |
| 50 | 1492.821 | 24 | 44 |
| 51 | 1504.393 | 29 | 26 |
| 52 | 1513.072 | 43 | 17 |
| 53 | 1523.680 | 24 | 27 |
| 54 | 1530.431 | 24 | 86 |
| 55 | 1537.181 | 24 | 24 |
| 56 | 1556.468 | 34 | 39 |
| 57 | 1574.791 | 61 | 31 |
| 58 | 1605.650 | 100 | 86 |
| 59 | 1618.187 | 89 | 69 |
| 60 | 1624.937 | 85 | 54 |
| 61 | 1655.797 | 48 | 42 |
| 62 | 1664.476 | 44 | 44 |
| 63 | 1670.262 | 42 | 60 |
| 64 | 1677.013 | 40 | 48 |
| 65 | 1686.656 | 36 | 31 |
| 66 | 1697.264 | 24 | 14 |
| 67 | 1702.086 | 21 | 29 |
| 68 | 1720.409 | 12 | 46 |
| 69 | 1736.803 | 10 | 23 |
| 70 | 1741.625 | 9 | 25 |
| 71 | 1763.805 | 3 | 15 |
| 72 | 1769.591 | 3 | 8 |
| 73 | 1774.413 | 2 | 19 |
| 74 | 1786.949 | 1 | 10 |
| 75 | 1794.664 | 1 | 10 |

R1

NAME OF SAMPLE FILE : MON42156
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42156.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 11 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 4 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 20 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 23 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 25 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 23 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 14 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 0 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 13 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 6 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 13 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 17 | 28 | HOR42014.APKL | ESTRIOL |
| 5 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 21 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 8 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 11 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 23 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 25 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 11 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 17 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 8 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 12 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 15 | 13 | HOR42055.APKL | EQUILENIN |
| 15 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 0 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 15 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 40 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 23 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 12 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 0 | 15 | HOR42032.APKL | ETHISTERONE |
| 13 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 9 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 21 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 9 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 22 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 21 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 76 | 17 | HOR42003.APKL | DIENESTROL |
| 22 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 13 | 15 | HOR42002.APKL | HEXESTROL |
| 30 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 20 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 0 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 0 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42003.APKL  DIENESTROL
FOUND IN PEAK TABLE OF SAMPLE MON42156.APKL

| REF | SAMP |
|---|---|
| 620.072 | 620.079 |
| 649.003 | 649.009 |
| 775.334 | 775.340 |
| 826.445 | 826.451 |
| 834.160 | 834.166 |
| 853.447 | 853.453 |
| 1102.251 | 1102.257 |
| 1170.720 | 1170.726 |
| 1205.437 | 1205.443 |
| 1246.905 | 1247.874 |
| 1332.733 | 1332.738 |
| 1513.067 | 1513.072 |
| 1619.147 | 1618.187 |

NUMBER OF MATCHES : 13
NUMBER OF PEAKS IN REF TABLE : 17
SCORE (% OF MATCHES): 76

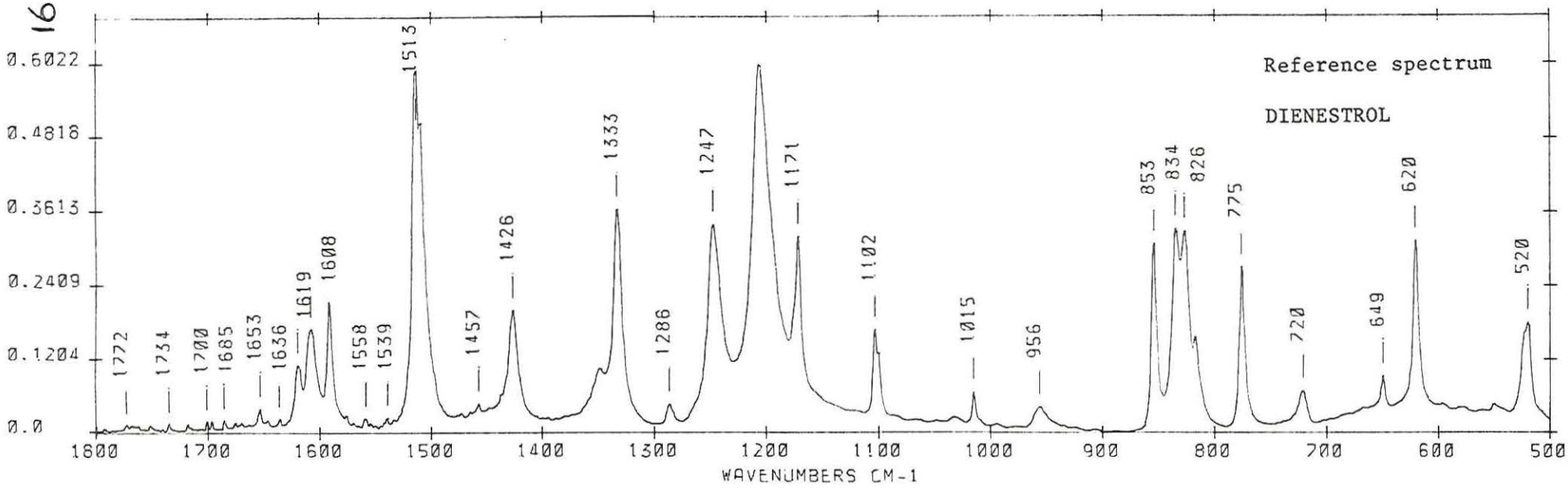
Mismatches

| REF | SAMPLE |
|---|---|
| 520 | peak present at maximum at 536 $cm^{-1}$ |
| 1426 | broad peak, with a maximum at 1421 $cm^{-1}$ |
| 1592 | broad peak present, maximum at 1606 $cm^{-1}$ |
| 1608 | broad peak present, maximum at 1606 $cm^{-1}$ |

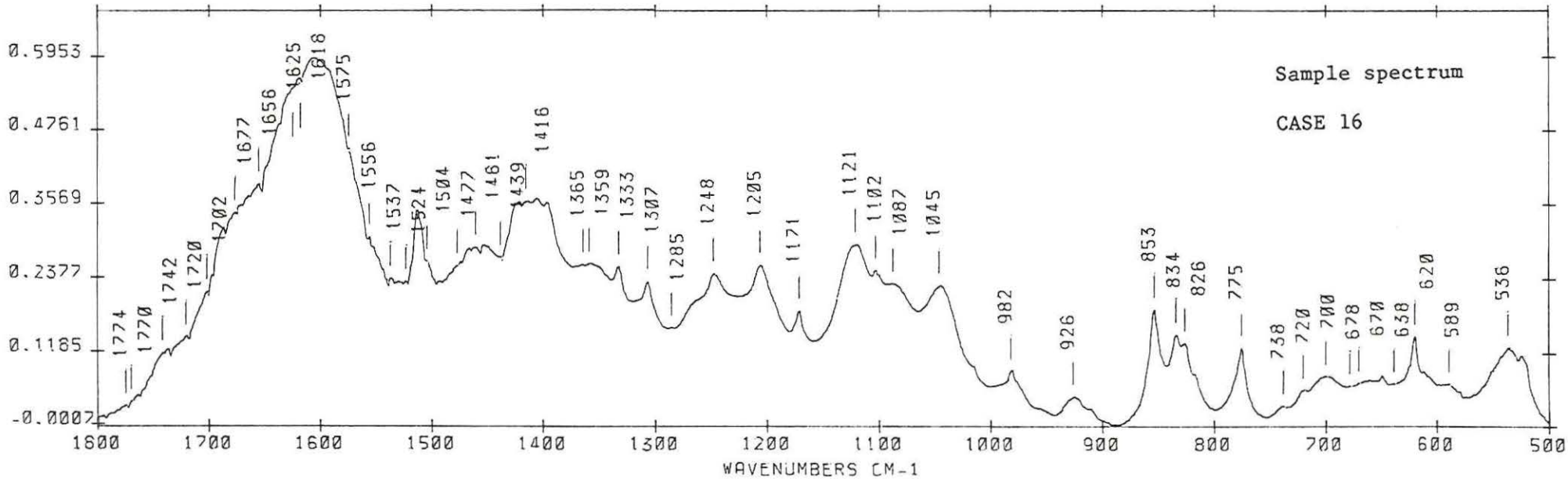
Conclusion: presence of dienestrol confirmed

16

FLS-HOR42003




FLS-MON42156



17 CASE 17

SAMPLE FILE : MON42181
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 1000

ADEQ. PEAK TABLE: MON42181.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
41 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 505.320 | 1 | 6 |
| 2 | 521.715 | 2 | 17 |
| 3 | 532.322 | 3 | 25 |
| 4 | 547.752 | 1 | 9 |
| 5 | 562.217 | 2 | 30 |
| 6 | 569.932 | 2 | 13 |
| 7 | 578.612 | 3 | 16 |
| 8 | 583.433 | 3 | 10 |
| 9 | 594.041 | 3 | 19 |
| 10 | 620.079 | 21 | 18 |
| 11 | 649.974 | 29 | 14 |
| 12 | 699.156 | 4 | 25 |
| 13 | 712.657 | 3 | 10 |
| 14 | 720.372 | 3 | 17 |
| 15 | 736.766 | 2 | 11 |
| 16 | 767.625 | 18 | 9 |
| 17 | 802.342 | 3 | 19 |
| 18 | 817.772 | 5 | 23 |
| 19 | 854.417 | 1 | 7 |
| 20 | 862.132 | 0 | 8 |
| 21 | 888.170 | 6 | 10 |
| 22 | 899.742 | 2 | 19 |
| 23 | 925.780 | 13 | 12 |
| 24 | 946.995 | 4 | 19 |
| 25 | 1014.500 | 24 | 43 |
| 26 | 1024.144 | 23 | 93 |
| 27 | 1046.324 | 29 | 70 |
| 28 | 1086.827 | 27 | 149 |
| 29 | 1122.508 | 32 | 112 |
| 30 | 1127.330 | 32 | 127 |
| 31 | 1241.124 | 17 | 60 |
| 32 | 1271.019 | 20 | 55 |
| 33 | 1366.490 | 43 | 70 |
| 34 | 1384.813 | 43 | 36 |
| 35 | 1436.888 | 64 | 104 |
| 36 | 1495.714 | 31 | 145 |
| 37 | 1498.607 | 31 | 226 |
| 38 | 1578.648 | 100 | 95 |
| 39 | 1658.690 | 54 | 42 |
| 40 | 1695.335 | 24 | 85 |
| 41 | 1733.910 | 16 | 56 |

NAME OF SAMPLE FILE : MON42181
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42181.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 3 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 4 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 6 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 23 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 15 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 9 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 19 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 22 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 8 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 6 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 13 | 30 | HOR42031.APKL | MESTRANOL |
| 14 | 14 | HOR42015.APKL | ESTRONE |
| 10 | 28 | HOR42014.APKL | ESTRIOL |
| 5 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 0 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 7 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 25 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 11 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 8 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 23 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 0 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 6 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 6 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 7 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 0 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 10 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 15 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 0 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 6 | 15 | HOR42032.APKL | ETHISTERONE |
| 6 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 27 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 20 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 14 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 13 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 8 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 17 | 17 | HOR42003.APKL | DIENESTROL |
| 5 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 0 | 15 | HOR42002.APKL | HEXESTROL |
| 0 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 0 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 0 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 23 | 13 | HOR42027.APKL | HYDROCURTISONE |

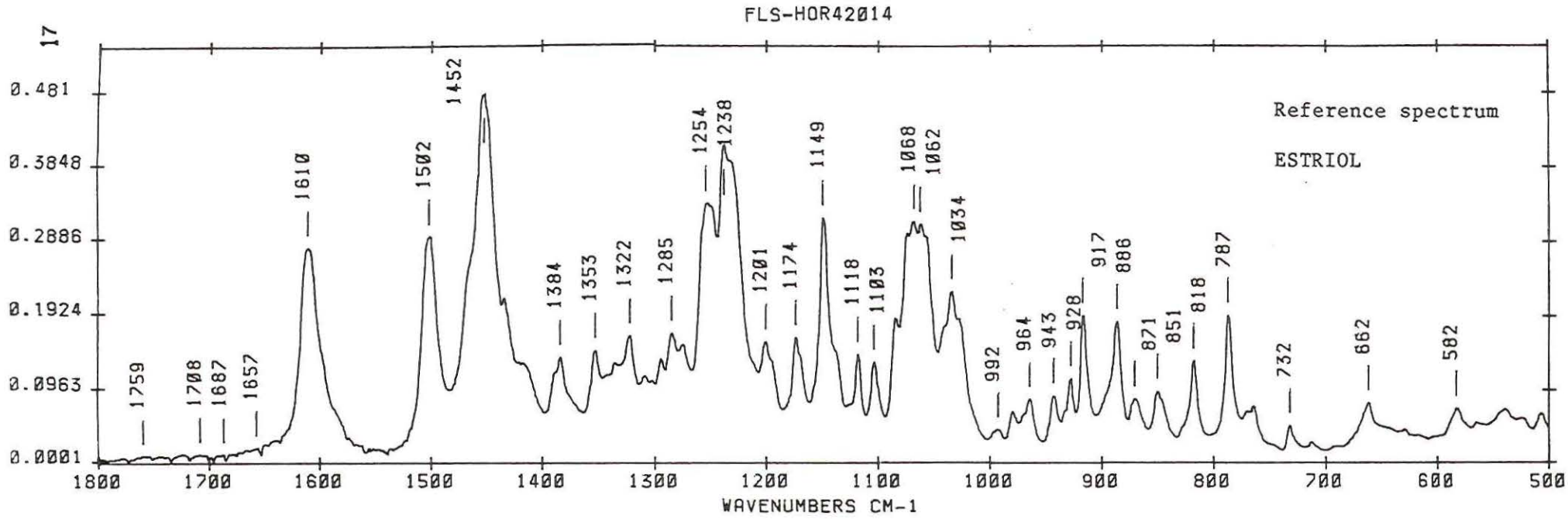
SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

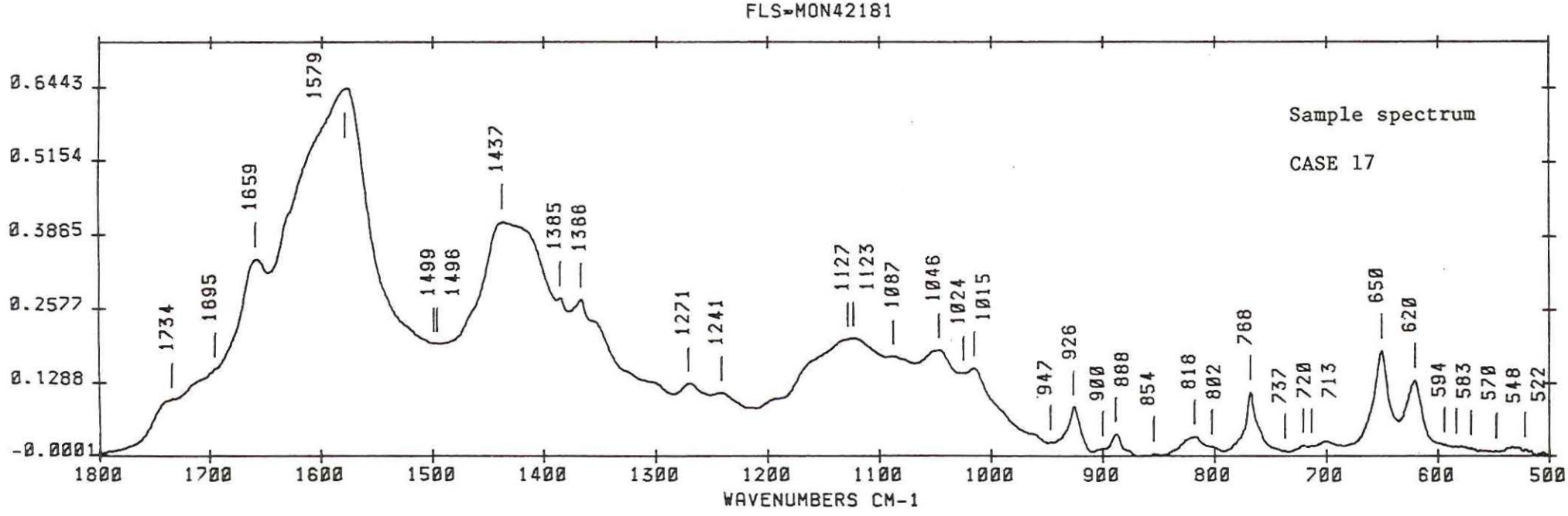
"RIKILT" A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

All scores < 50 %

None of the compounds in the library fulfils the first criterion

Conclusion: presence of estriol is not confirmed


FLS-HOR42014
17
Reference spectrum
ESTRIOL
0.481
0.3848
0.2886
0.1924
0.0963
0.0001
1759
1708
1687
1657
1610
1502
1452
1384
1353
1322
1285
1254
1238
1201
1174
1149
1118
1103
1068
1062
1034
992
964
943
928
917
886
871
851
818
787
732
662
582
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42181
Sample spectrum
CASE 17
0.6443
0.5154
0.3865
0.2577
0.1288
-0.0001
1734
1695
1659
1579
1499
1496
1437
1385
1368
1271
1241
1127
1123
1087
1046
1024
1015
947
926
900
888
854
818
802
788
737
720
713
650
620
594
583
570
548
522
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

18 CASE 18

SAMPLE FILE : MON42182
SAMPLE TECHNIQUE : DIFFUSE REFLECTION
NUMBER OF SCANS : 1000

ADEQ. PEAK TABLE: MON42182.APKL

SENSITIVITY ORIGINAL PEAK TABLE : 100
57 PEAKS.

| NO. | WAVE-NO. | REL. INTENSITY | WIDTH CM-1 |
|---|---|---|---|
| 1 | 517.857 | 4 | 8 |
| 2 | 542.930 | 3 | 28 |
| 3 | 550.645 | 3 | 11 |
| 4 | 563.182 | 4 | 13 |
| 5 | 569.932 | 4 | 11 |
| 6 | 580.540 | 4 | 14 |
| 7 | 583.433 | 4 | 22 |
| 8 | 598.863 | 6 | 14 |
| 9 | 603.685 | 6 | 16 |
| 10 | 621.043 | 16 | 15 |
| 11 | 636.473 | 6 | 25 |
| 12 | 649.974 | 22 | 12 |
| 13 | 669.261 | 3 | 10 |
| 14 | 674.083 | 2 | 12 |
| 15 | 680.833 | 4 | 7 |
| 16 | 691.441 | 2 | 9 |
| 17 | 699.156 | 2 | 10 |
| 18 | 703.013 | 2 | 6 |
| 19 | 704.942 | 2 | 14 |
| 20 | 712.657 | 1 | 10 |
| 21 | 719.407 | 1 | 12 |
| 22 | 736.766 | 0 | 1 |
| 23 | 739.659 | 0 | 2 |
| 24 | 767.625 | 14 | 10 |
| 25 | 780.162 | 3 | 14 |
| 26 | 798.485 | 1 | 6 |
| 27 | 816.807 | 1 | 6 |
| 28 | 837.059 | 5 | 7 |
| 29 | 872.740 | 9 | 10 |
| 30 | 875.633 | 8 | 8 |
| 31 | 900.706 | 2 | 16 |
| 32 | 926.744 | 15 | 14 |
| 33 | 937.352 | 8 | 14 |
| 34 | 950.853 | 12 | 11 |
| 35 | 974.962 | 10 | 41 |
| 36 | 1020.286 | 29 | 55 |
| 37 | 1050.181 | 31 | 89 |
| 38 | 1069.469 | 29 | 84 |
| 39 | 1091.649 | 34 | 38 |
| 40 | 1104.185 | 32 | 112 |
| 41 | 1156.261 | 27 | 25 |
| 42 | 1189.049 | 15 | 48 |
| 43 | 1235.338 | 16 | 23 |
| 44 | 1271.019 | 20 | 36 |
| 45 | 1297.057 | 16 | 19 |
| 46 | 1330.809 | 21 | 29 |
| 47 | 1358.775 | 35 | 54 |
| 48 | 1366.490 | 40 | 25 |
| 49 | 1374.205 | 40 | 54 |
| 50 | 1383.849 | 44 | 19 |
| 51 | 1436.888 | 57 | 100 |
| 52 | 1498.607 | 20 | 102 |
| 53 | 1576.720 | 100 | 76 |
| 54 | 1630.724 | 52 | 21 |
| 55 | 1650.011 | 33 | 315 |
| 56 | 1664.476 | 48 | 37 |
| 57 | 1733.910 | 8 | 35 |

NAME OF SAMPLE FILE : MON42182
LIBRARY NAME : HORLIB
CLASSIFICATION NUMBER : 0

"RIKILT" A D E Q U A T E P E A K S S E A R C H R E P O R T

SEARCH IS PERFORMED ON FILE: MON42182.APKL

| SCORE | ADQ.P. | FILE | COMPOUND |
|---|---|---|---|
| 14 | 27 | HOR42006.APKL | ESTRADIOL-17B |
| 8 | 24 | HOR42007.APKL | ESTRADIOL-17A |
| 26 | 15 | HOR42008.APKL | ESTRADIOL-17B-ACETATE |
| 15 | 13 | HOR42011.APKL | ESTRADIOL-17B-DIACETATE |
| 10 | 20 | HOR42056.APKL | ESTRADIOL-17B-PROPIONATE |
| 4 | 21 | HOR42012.APKL | ESTRADIOL-17B-DIPROPIONATE |
| 14 | 21 | HOR42010.APKL | ESTRADIOL-17B-3-SULPHATE |
| 11 | 18 | HOR42009.APKL | ESTRADIOL-17B-3-BENZOATE |
| 17 | 23 | HOR42013.APKL | ESTRADIOL-17B-3-METHYLETHER |
| 12 | 32 | HOR42016.APKL | ETHINYLESTRADIOL |
| 10 | 30 | HOR42031.APKL | MESTRANOL |
| 21 | 14 | HOR42015.APKL | ESTRONE |
| 17 | 28 | HOR42014.APKL | ESTRIOL |
| 5 | 18 | HOR42020.APKL | TESTOSTERONE-17B |
| 14 | 7 | HOR42101.APKL | TESTOSTERONE-17A |
| 0 | 14 | HOR42029.APKL | TESTOSTERONE-ACETATE |
| 25 | 12 | HOR42028.APKL | TESTOSTERONE-PROPIONATE |
| 23 | 17 | HOR42071.APKL | TESTOSTERONE-ISOCAPROATE |
| 7 | 13 | HOR42070.APKL | TESTOSTERONE-DECANOATE |
| 0 | 12 | HOR42073.APKL | TESTOSTERONE-UNDECANOATE |
| 23 | 17 | HOR42072.APKL | TESTOSTERONE-PHENPROPIONATE |
| 11 | 17 | HOR42033.APKL | TESTOSTERONE-BENZOATE |
| 75 | 12 | HOR42022.APKL | METHYLTESTOSTERONE-17B,4D |
| 37 | 16 | HOR42049.APKL | METHYLTESTOSTERONE-17B,4-11D |
| 13 | 15 | HOR42054.APKL | EQUILIN |
| 7 | 13 | HOR42055.APKL | EQUILENIN |
| 0 | 13 | HOR42021.APKL | NORTESTOSTERONE |
| 11 | 9 | HOR42100.APKL | NORTESTOSTERONE-17A |
| 7 | 13 | HOR42053.APKL | NORTESTOSTERONE-PROPIONATE |
| 20 | 10 | HOR42039.APKL | NORTESTOSTERONE-DECANOATE |
| 7 | 13 | HOR42034.APKL | NORTESTOSTERONE-LAURATE |
| 31 | 16 | HOR42040.APKL | NORTESTOSTERONE-PHENPROPIONATE |
| 20 | 15 | HOR42032.APKL | ETHISTERONE |
| 6 | 15 | HOR42023.APKL | TRENBOLONE-17B |
| 13 | 22 | HOR42024.APKL | TRENBOLONE-17A |
| 10 | 10 | HOR42102.APKL | TRENBOLONE-17B-ACETATE |
| 7 | 14 | HOR42017.APKL | PROGESTERONE |
| 25 | 12 | HOR42018.APKL | MEDROXY-PROGESTERONE |
| 0 | 11 | HOR42019.APKL | MEDROXYPROGESTERONE-ACETATE |
| 9 | 22 | HOR42030.APKL | MEGESTROL-ACETATE |
| 4 | 23 | HOR42103.APKL | MELENGESTROL-ACETATE |
| 11 | 17 | HOR42003.APKL | DIENESTROL |
| 0 | 18 | HOR42001.APKL | DIETHYL-STILBESTROL |
| 0 | 15 | HOR42002.APKL | HEXESTROL |
| 10 | 10 | HOR42005.APKL | DIENESTROL-DIACETATE |
| 20 | 10 | HOR42004.APKL | DES-DIPROPIONATE |
| 0 | 14 | HOR42025.APKL | ZERANOL |
| 7 | 13 | HOR42026.APKL | CORTICOSTERONE |
| 15 | 13 | HOR42027.APKL | HYDROCORTISONE |

SCORE = PERCENTAGE OF ADEQUATE PEAKS FOUND IN SAMPLE PEAK TABLE
ADQ.P. = NUMBER OF ADEQUATE PEAKS IN REFERENCE SPECTRUM

"RIKILT"  A D E Q U A T E  P E A K S  S E A R C H  R E P O R T

ADEQUATE PEAKS OF REFERENCE FILE:
HOR42022.APKL  METHYLTESTOSTERONE-17B,4D
FOUND IN PEAK TABLE OF SAMPLE MON42182.APKL

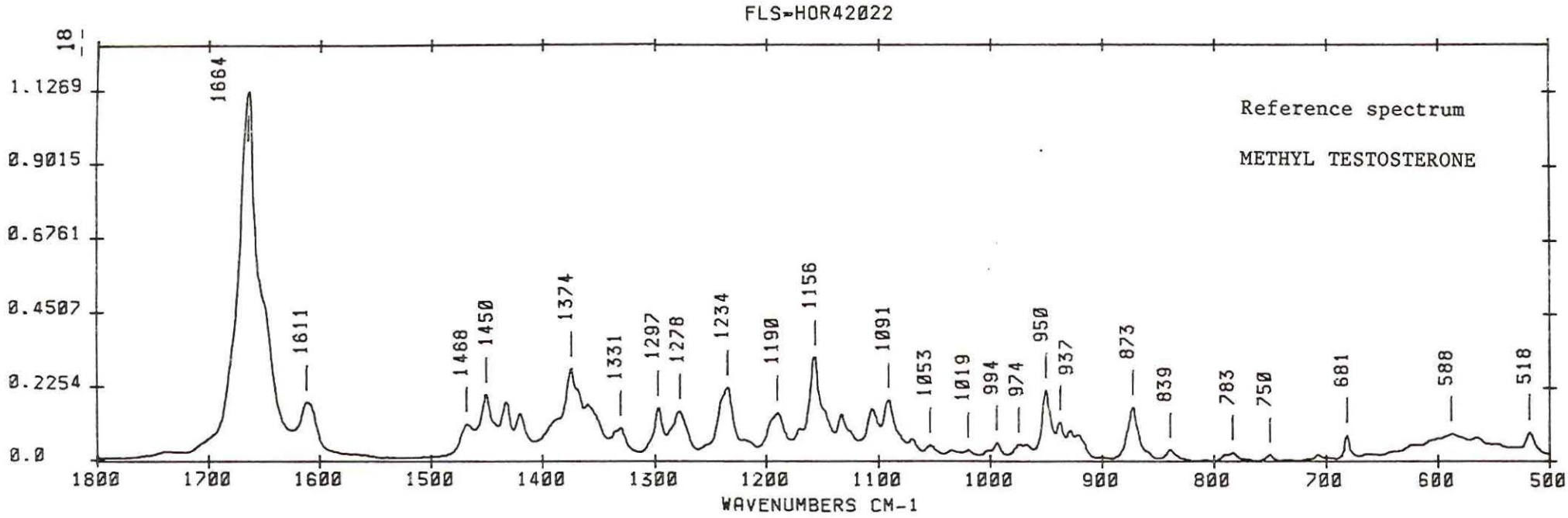
| REF | SAMP |
|---|---|
| 872.733 | 872.740 |
| 949.882 | 950.853 |
| 1090.678 | 1091.649 |
| 1156.254 | 1156.261 |
| 1190.006 | 1189.049 |
| 1234.367 | 1235.338 |
| 1297.050 | 1297.057 |
| 1374.198 | 1374.205 |
| 1663.505 | 1664.476 |

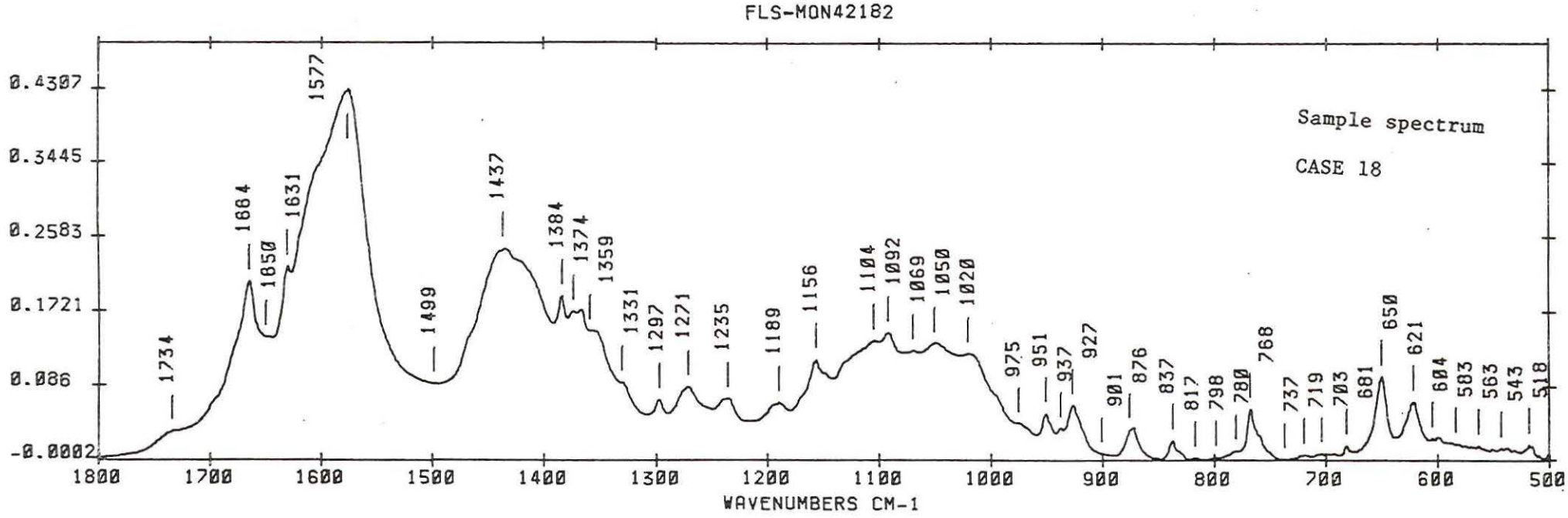
NUMBER OF MATCHES : 9
NUMBER OF PEAKS IN REF TABLE : 12
SCORE (% OF MATCHES): 75

Mismatches

| REF | SAMPLE |
|---|---|
| 1278 | present as a broad peak, maximum at 1271 $cm^{-1}$ |
| 1450 | disappeared under peak at 1437 $cm^{-1}$ |
| 1611 | present as a shoulder or peak at 1577 $cm^{-1}$ |

Conclusion: presence of methyltestosterone confirmed


FLS-HOR42022
Reference spectrum
METHYL TESTOSTERONE
1.1269
0.9015
0.6761
0.4507
0.2254
0.0
1664
1611
1468
1450
1374
1331
1297
1278
1234
1190
1156
1091
1053
1019
994
974
950
937
873
839
783
750
681
588
518
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1


FLS-MON42182
Sample spectrum
CASE 18
0.4307
0.3445
0.2583
0.1721
0.086
-0.0002
1734
1684
1650
1631
1577
1499
1437
1384
1374
1359
1331
1297
1271
1235
1189
1156
1104
1092
1069
1050
1020
975
951
937
927
901
876
837
817
798
780
768
737
719
703
681
650
621
604
583
563
543
518
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
WAVENUMBERS CM-1

Systematic index

| No. | Compound | Filename |
|---|---|---|
| 1 | Estradiol-17β | HOR42006 |
| 2 | Estradiol-17α | HOR42007 |
| 3 | Estradiol-17-acetate | HOR42008 |
| 4 | Estradiol-diacetate | HOR42011 |
| 5 | Estradiol-17-propionate | HOR42056 |
| 6 | Estradiol-dipropionate | HOR42012 |
| 7 | Estradiol-3-sulphate | HOR42010 |
| 8 | Estradiol-3-benzoate | HOR42009 |
| 9 | Estradiol-3-methylether | HOR42013 |
| 10 | Ethinylestradiol | HOR42016 |
| 11 | Mestranol | HOR42031 |
| 12 | Estrone | HOR42015 |
| 13 | Estriol | HOR42014 |
| 14 | Equilin | HOR42054 |
| 15 | Equilenin | HOR42055 |
| 16 | Testosterone-17β | HOR42020 |
| 17 | Testosterone-17α | HOR42101 |
| 18 | Testosterone-acetate | HOR42029 |
| 19 | Testosterone-propionate | HOR42028 |
| 20 | Testosterone-isocaproate | HOR42071 |
| 21 | Testosterone-decanoate | HOR42070 |
| 22 | Testosterone-undecanoate | HOR42073 |
| 23 | Testosterone-phenylpropionate | HOR42072 |
| 24 | Testosterone-benzoate | HOR42033 |
| 25 | Methyltestosterone-17α | HOR42022 |
| 26 | Methyltestosterone-D9(11) | HOR42049 |
| 27 | Nortestosterone-17β | HOR42021 |
| 28 | Nortestosterone-17α | HOR42100 |
| 29 | Nortestosterone-propionate | HOR42053 |
| 30 | Nortestosterone-decanoate | HOR42039 |
| 31 | Nortestosterone-laurate | HOR42034 |
| 32 | Nortestosterone-phenylpropionate | HOR42040 |
| 33 | Ethisterone | HOR42032 |
| 34 | Trenbolone-17β | HOR42023 |
| 35 | Trenbolone-17α | HOR42024 |
| 36 | Trenbolone-acetate | HOR42102 |
| 37 | Progesterone | HOR42017 |
| 38 | Medroxyprogesterone | HOR42018 |
| 39 | Medroxyprogesterone-acetate | HOR42019 |
| 40 | Megestrol-acetate | HOR42030 |
| 41 | Melengestrol-acetate | HOR42103 |