by exposure to light, inadequate temperature, or anti-oxidant containing hand-creme were absent or flagged with expected error codes. Humidity interfered with 1 of 3 INRratio results and yielded expected error codes in 3of 3 Coaguckek XS results. The INR of a patient suffering from a factor V deficiency (60% normal) was 15% increased on Coagucheck XS and 42% increased on the INRratio.
Conclusions. Compared to INRatio the Coaguchek XS shows better agreement with the laboratory method, lower imprecision and less interference. Added to its robust and intuitive design this makes the Coaguckek XS the better choice for self management of oral anticoagulant therapy.

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AFINION™ CRP, A NEW POINT OF CARE TEST FOR DETERMINATION OF C-REACTIVE PROTEIN IN HUMAN SERUM/PLASMA AND WHOLE BLOOD

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Background. Afinion™ CRP is a new Point of Care diagnostic test for the quantitative determination of C-reactive protein (CRP) in human whole blood, serum and plasma. The measurement of CRP provides information for the detection and evaluation of infection, tissue injury and inflammatory disorder.
Methods. Afinion™ AS100 Analyzer is a small, bench-top multi-assay analyzer for Point of Care testing, combining advanced immunoassay and opto-mechanical technology with integrated camera, computer and LCD display. The Afinion™ Test Cartridge contains all the reagents necessary for measuring the antigen concentration in the sample. The cartridge is automatically analysed with the Afinion™ AS100 Analyzer; where the reagents are sequentially soaked through an antibody-coated membrane. The camera finally reads the colour intensity of the membrane.
Result. The CRP measuring range is 5-160 mg/L in serum and plasma and 8-200 mg/L in whole blood. CRP in whole blood is automatically corrected according to the sample's hematocrit (Hct). Within-run and between-day precision was determined for one whole blood and two serum samples according to the NCCLS Guidelines. Mean CRP was respectively 34 mg/L, 15 mg/L and 68 mg/L. Within-run CV was respectively 5.7, 4.7 and 4.0 %. Between-day CV was respectively 2.3, 2.2 and 1.7%. Comparison of Afinion™ CRP with two immunoturbidimetric laboratory methods gave regression line y=0.93x–0.9 and correlation r=0.98 for method 1 (N=80), and y=1.01x+0.8 and r=0.99 for method 2 (N=67).
Conclusions. The new Afinion™ CRP device provides a reliable, precise and convenient PoC method for determination of CRP.

M238
HUGE DISCREPANCY BETWEEN POCT AND CENTRAL LABORATORY GLUCOSE MEASUREMENTS: A CASE REPORT

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Background. In many hospitals, Point-of-Care Test (POCT) devices are used by the nursing staff for glucose measurements. The central laboratory provides training, education, quality control and back-up. In our hospital, POCT glucose values <2.5 mmol/L and >30 mmol/L are confirmed by the central laboratory. Recently, a huge discrepancy between POCT-glucose and laboratory values was found in a cancer patient with disregulated glucose metabolism due to dexamethasone treatment.
Methods. Glucose was measured on an AccuChek Inform (Roche Diagnostics) using full blood calibrated strips. Laboratory determinations were performed on an Integra 800 (Roche Diagnostics) using NaF plasma from venepuncture.
Results. A POCT-glucose result of >33.3 mmol/L was repeated by the nurse on the same instrument and gave an identical value. Venepuncture was performed 45 minutes later, resulting in the central laboratory in a glucose concentration of 4.1 mmol/L. The POCT measurement was repeated 45 minutes later under supervision of a technician, now yielding 22.3 mmol/L, whereas laboratory measurement in NaF-plasma gave 3.8 mmol/L. A simultaneously obtained Li-heparin sample measured on the AccuChek Inform gave a value of 3.3 mmol/L. A new capillary sample, this time taken from the other hand of the patient, measured 3.6 mmol/L on the AccuChek Inform. This case suggests that a pre-analytical factor, possibly an interfering substance on the hand of the patient, might play a role in the observed discrepancy.
Conclusions. Huge discrepancies between POCT and central laboratory glucose measurements may incidentally occur. In our case, pre-analytical interference is suspected. Further studies are needed to clarify this.

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MICROFLUIDIC ANOIKIS-CHIP FOR SCREENING OF CYTOSTATIC DRUGS FOR CANCER TREATMENT

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Background. Anoikis ("homeless") refers to the process of detachment of cells from their matrix which causes cell death. For detailed drug-screening, microfluidics is ideal for studying the balance between cell survival and cell death, as cells can be studied in real-time at a single cell level in the presence of different (dosages of) drugs.
Methods. MCF-7 breast cancer cells were incubated with a mixture of TNF-α and cycloheximide (CHX) or staurosporine (SSP) to induce apoptosis. The process of anoikis was measured conventional with a DELFIA assay and analyzed in real-time on chip at a single cell level using Annexin V and propidium iodide (PI).
Results. TNF-α/CHX and SSP both activated the apoptotic cascade, confirmed with light microscopy, and demonstrated an increase in time in the Annexin V-Europium fluorescent intensity in the adherent cell fraction and the fraction with floating cells and apoptotic bodies. For detailed cellular-based experiments, MCF-7 cells were successfully cultured in a microfluidic device. Continuous administration of 50µM SSP showed 100% positive for Annexin V and PI, though cells did not detach. Incubation over longer periods with TNF-α/CHX demonstrated all the characteristics of the apoptotic process (shrinkage, fragmentation, membrane blebbing) though cells hardly detach. Differences in material (pyrex glass vs. polystyrene) and the way of administration (single vs. continuous administration) might account for the effects seen and therefore further analysis is necessary.
Conclusions. Microfluidics has the potential for effective drug-screening and when using patient's own cells obtained via biopsy optimal selection of cytotoxic treatment can be made.