



Improving the detection of low concentration metabolites in magnetic resonance spectroscopy by digital filtering

Submitted by Laurent Lemaire on Mon, 12/01/2014 - 15:57

Titre	Improving the detection of low concentration metabolites in magnetic resonance spectroscopy by digital filtering
Type de publication	Article de revue
Auteur	Lemaire, Laurent [1], Franconi, Florence [2], Le Jeune, Jean-Jacques [3], Jallet, P [4], Richomme, Pascal [5]
Editeur	Springer Verlag
Type	Article scientifique dans une revue à comité de lecture
Année	1999
Langue	Anglais
Date	1999 Mar
Pagination	244-6
Volume	37
Section	2
Titre de la revue	Medical and Biological Engineering and Computing
ISSN	0140-0118
Mots-clés	Humans [6], Magnetic Resonance Spectroscopy [7], Sensitivity and Specificity [8], Signal Processing, Computer-Assisted [9]
Résumé en anglais	<p>In vivo detection and quantitation of metabolites is often limited by their low concentration. As far as magnetic resonance spectroscopy (MRS) is concerned, detection and quantitation can be significantly improved by reduction of the observed spectral width (SW). The reduction is limited to the spreading of resonances in the bandwidth unless high performance digital filters are used. Indeed, these filters avoid the folding of unwanted resonances such as water peak into the main frequency spectrum and therefore allow reduction of the spectral width to its optimal value. These filters are now available on most MRS systems but their use is not common even if, as we show in the particular case of proton MRS, a significant increase in signal-to-noise ratio (two-fold factor for SW reduction from 5000 Hz to 1351 Hz) can be achieved. This signal-to-noise improvement allows better quantitation accuracy.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua5692 [10]
Autre titre	Med Biol Eng Comput
Identifiant (ID) PubMed	10396829 [11]

Liens

[1] <http://okina.univ-angers.fr/l.lemaire/publications>

[2] <http://okina.univ-angers.fr/f.franconi/publications>

- [3] [http://okina.univ-angers.fr/publications?f\[author\]=11012](http://okina.univ-angers.fr/publications?f[author]=11012)
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