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(54) Title: MASS SPECTROMETRY

(57) Abstract: Provided is a method for processing data from a mass spectrum generated from a sample, which method comprises: (a) selecting a first peak in the mass spectrum; (b) selecting a first monoisotopic reference ion having a first charge state, which first reference ion could contribute to the first peak; (c) for one or more other isotopic forms of the first reference ion determining one or more further expected peaks in the mass spectrum; (d) comparing one or more of the determined further expected peaks with the mass spectrum to determine whether there are one or more peaks present in the spectrum that match the one or more determined further expected peaks; (e) if one or more of the determined further expected peaks match one or more of the peaks in the mass spectrum, designating the first peak as a data peak, and optionally designating the one or more peaks present in the spectrum that match the one or more determined further expected peaks as data peaks; (f) if the determined further expected peaks do not match peaks in the mass spectrum, repeating steps (b) to (e) with one or more further reference ions in one or more further charge states; (g) optionally if the first peak cannot be designated as a data peak for a reference ion in the first charge state, or for a further reference ion in the further charge states, designating the first peak as a non-data peak; (h) optionally repeating steps (a) - (g) for one or more further peaks in the mass spectrum.

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# INTERNATIONAL SEARCH REPORT

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<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) H01J				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	WEHOFSKY M ET AL: "Automated deconvolution and deisotoping of electrospray mass spectra" JOURNAL OF MASS SPECTROMETRY, WILEY, CHICHESTER, GB, vol. 37, 2002, pages 223-229, XP002902843 ISSN: 1076-5174 pages 223-225; figures 1,2  ----- -/--	1-3,5-8, 11-24,26		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.                 </td> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> Patent family members are listed in annex.                 </td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZHANG Z ET AL: "A Universal Algorithm for Fast and Automated Charge State Deconvolution of Electrospray Mass-to-Charge Ratio Spectra" JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY, ELSEVIER SCIENCE INC, US, vol. 9, no. 3, March 1998 (1998-03), pages 225-233, XP004112012 ISSN: 1044-0305 pages 228-229; figure 3	1,23
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Information on patent family members

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