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(54) **Selective filtration of cigarette smoke using chitosan derivatives**

(57) A smoking article filter having a porous resin with a high surface area to mass ratio comprised of a chitosan derivative. Preferred embodiments include chitosan cross-linked with glutaraldehyde and chitosan cross-linked with glyoxal. The chitosan derivative provides for

the selective filtration of cigarette smoke, particularly for the removal of aldehydes, hydrogen cyanide, heavy metals and carbonyls.

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**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention. EP 12 17 6082  
 This report shall be considered, for the purposes of  
 subsequent proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 5 993 661 A (RUCKENSTEIN ET AL) 30 November 1999 (1999-11-30) * column 3, line 62 - column 5, line 26; example 10 *	5,6	INV. A24D3/08
Y	EP 0 311 882 A (URAGAMI, TADASHI; LIGNYTE CO., LTD) 19 April 1989 (1989-04-19) * page 2, line 10 - line 34; example 1 *	5,6	
A	US 4 018 678 A (PENISTON ET AL) 19 April 1977 (1977-04-19) * claims; examples *	5,6	
			TECHNICAL FIELDS SEARCHED (IPC)
			A24D
<b>INCOMPLETE SEARCH</b>			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.</p> <p>Claims searched completely :</p> <p>Claims searched incompletely :</p> <p>Claims not searched :</p> <p>Reason for the limitation of the search:</p> <p>see sheet C</p>			
Place of search		Date of completion of the search	Examiner
The Hague		20 September 2013	Leprêtre, François
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone          Y : particularly relevant if combined with another document of the same category          A : technological background          O : non-written disclosure          P : intermediate document</p> <p>T : theory or principle underlying the invention          E : earlier patent document, but published on, or after the filing date          D : document cited in the application          L : document cited for other reasons          &amp; : member of the same patent family, corresponding document</p>			

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**INCOMPLETE SEARCH  
SHEET C**Application Number  
EP 12 17 6082

Claim(s) completely searchable:  
5, 6

Claim(s) not searched:  
1-4, 7-15

Reason for the limitation of the search:

Claims 1,5,7,9,and 14 have been drafted as separate independent claims. Under Article 84 in combination with Rule 43(2) EPC, an application may contain more than one independent claim in a particular category only if the subject-matter claimed falls within one or more of the exceptional situations set out in paragraph (a), (b) or (c) of Rule 43(2) EPC. This is not the case however in the present application, in particular the claims do not constitute alternatives to a particular problem, but either concern different methods for solving different problems (claims 1,9,14) or alternative methods for solving the same problem that could appropriately be covered by a single claim (claims 5,7). In addition, following an invitation pursuant to Rule 62a(1) EPC, the applicant has indicated by letter of 12 April 2013 that the search should be carried out on the basis of independent claim 5. The search has hence be restricted to the subject matter of claim 5 and to its dependent claim 6.

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 17 6082

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-09-2013

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