

Title (en)  
CIGARETTE FILTER

Title (de)  
ZIGARETTENFILTER

Title (fr)  
FILTRE DE CIGARETTE

Publication  
**EP 1411784 A1 20040428 (EN)**

Application  
**EP 02756831 A 20020730**

Priority  
• US 0224240 W 20020730  
• US 30938801 P 20010801  
• US 30943501 P 20010801  
• US 1184101 A 20011030

Abstract (en)  
[origin: WO03015544A1] A cigarette filter that includes a multiple section filter which reduces the level of predetermined smoke constituents. The filter (130) consists of a fibrous filter plug (132) located at the mouth-end of the cigarette, a section (136) containing a selective adsorbent material, and a section (134) containing a general adsorbent material. The selective adsorbent material, such as a phenol-formaldehyde resin matrix surface-functionalized with mainly primary and secondary amine functional groups, removes specific smoke constituents from the tobacco smoke. The general adsorbent material, such as activated charcoal, is preferably capable of adsorbing a range of chemical compounds without a high degree of specificity. Structurally, the fibrous filter plug, the selective adsorbent section, and the general adsorbent section are co-axially aligned in tandem.

IPC 1-7  
**A24D 3/12**; **A24D 3/16**

IPC 8 full level  
**A24D 3/04** (2006.01); **A24D 3/06** (2006.01); **A24D 3/10** (2006.01); **A24D 3/12** (2006.01); **A24D 3/16** (2006.01)

CPC (source: EP KR US)  
**A24D 3/12** (2013.01 - EP KR US); **A24D 3/16** (2013.01 - EP US); **A24D 3/163** (2013.01 - EP US)

Citation (search report)  
See references of WO 03015544A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**WO 03015544 A1 20030227**; AP 2004002985 A0 20040331; AP 2134 A 20100713; AR 034967 A1 20040324; AT E527901 T1 20111015; AU 2002322811 B2 20060309; BR 0211853 A 20040908; BR 0211853 B1 20111129; CA 2454820 A1 20030227; CA 2454820 C 20070605; CN 100496312 C 20090610; CN 1553777 A 20041208; EA 005323 B1 20050224; EA 200400191 A1 20040624; EG 23137 A 20040428; EP 1411784 A1 20040428; EP 1411784 B1 20111012; EP 1411784 B8 20120307; ES 2375106 T3 20120224; HR P20040166 A2 20040831; HR P20040166 B1 20131122; HU P0401565 A2 20041129; HU P0401565 A3 20120928; IL 160150 A0 20040725; IL 160150 A 20080320; JP 2004538016 A 20041224; JP 4028483 B2 20071226; KR 100838207 B1 20080613; KR 20040026699 A 20040331; MX PA04001044 A 20040622; MY 128508 A 20070228; NO 20040452 L 20040329; NZ 531256 A 20050729; OA 12647 A 20060616; PL 200589 B1 20090130; PL 368136 A1 20050321; RS 11204 A 20070205; RS 51032 B 20101031; TW I239237 B 20050911; US 2003066539 A1 20030410; US 2004237984 A1 20041202; ZA 200401077 B 20050629

DOCDB simple family (application)  
**US 0224240 W 20020730**; AP 2004002985 A 20020730; AR P020102923 A 20020801; AT 02756831 T 20020730; AU 2002322811 A 20020730; BR 0211853 A 20020730; CA 2454820 A 20020730; CN 02817669 A 20020730; EA 200400191 A 20020730; EG 2002080870 A 20020803; EP 02756831 A 20020730; ES 02756831 T 20020730; HR P20040166 A 20040219; HU P0401565 A 20020730; IL 16015002 A 20020730; IL 16015004 A 20040201; JP 2003520314 A 20020730; KR 20047001625 A 20020730; MX PA04001044 A 20020730; MY PI20022886 A 20020731; NO 20040452 A 20040202; NZ 53125602 A 20020730; OA 1200400032 A 20020730; PL 36813602 A 20020730; TW 91117045 A 20020730; US 1184101 A 20011030; US 48547904 A 20040130; YU P11204 A 20020730; ZA 200401077 A 20040210