

Title (en)  
ANTIBACTERIAL FIBER, AND METHOD FOR MANUFACTURING ANTIBACTERIAL FIBER

Title (de)  
ANTIBAKTERIELLE FASER UND VERFAHREN ZUR HERSTELLUNG EINER ANTIBAKTERIELLEN FASER

Title (fr)  
FIBRE ANTIBACTÉRIENNE, ET PROCÉDÉ DE FABRICATION DE FIBRE ANTIBACTÉRIENNE

Publication  
**EP 3683341 A4 20200722 (EN)**

Application  
**EP 19798520 A 20190603**

Priority  
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• JP 2019021950 W 20190603

Abstract (en)  
[origin: EP3683341A1] Provided are an antibacterial fiber in which the amount of incorporation of an antibacterial glass is made sufficient with a small amount by reducing the content of the antibacterial glass in a core portion compared to the content of the antibacterial glass in a sheath portion, and which could exhibit excellent antibacterial properties; and an efficient method for producing such an antibacterial fiber. Disclosed is an antibacterial fiber containing a thermoplastic resin and an antibacterial glass as mixing components, the antibacterial fiber having an average diameter adjusted to a value within the range of 1 to 50  $\mu\text{m}$ , the antibacterial fiber including a core portion and a sheath portion, in which when a content of the antibacterial glass in the core portion is designated as Q1 (weight%) with respect to the total amount of the antibacterial fiber, and a content of the antibacterial glass in the sheath portion is designated as Q2 (weight%) with respect to the total amount of the antibacterial fiber, Q1 and Q2 satisfy the following relational expression (1):  $Q1 < Q2$

IPC 8 full level  
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Citation (search report)  
• [X] US 2015361595 A1 20151217 - KEANE JEFFREY [US], et al  
• [X] US 2010055437 A1 20100304 - FINK E DAVID [US], et al  
• [I] US 6037057 A 20000314 - HARTZOG JAMES VICTOR [US], et al  
• [I] US 2007269643 A1 20071122 - BENNETT JAMES CALVIN [US], et al  
• See references of WO 2020115928A1

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