

**FLAT-PLATE MEMBRANE FILTER ELEMENT, MANUFACTURING METHOD
THEREOF, FLAT-PLATE MEMBRANE FILTER MODULE AND MEMBRANE
BIOREACTOR**

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ABSTRACT

The present disclosure relates to a flat-plate membrane filter element,
a manufacturing method thereof, a flat-plate membrane filter module and a
10 membrane bioreactor. The flat-plate membrane filter element comprises: a
membrane support member, wherein the membrane support member has a
flat-plate shape; a serpentine flow channel is formed on a surface of the
membrane support member; openings at both ends of the flow channel are
formed on the side of the membrane support member; nonwoven fabric
15 membranes are respectively disposed on an upper surface and an lower
surface of the membrane support member; edges of the nonwoven fabric
membranes are bonded to the membrane support member in such a way that
the flow channel on the membrane support member is covered under the
nonwoven fabric membrane; and an outlet pipe is communicated with the
20 openings at both ends of the flow channel. The flat-plate membrane filter
element has the advantages of high strength, long service life, easy
production and high filtration efficiency.

FIG. 4