A thermal flow meter for use in dialysis is described, that uses a thermal wave to generate a signal in the fluid for which the flow rate is to be measured. The phase angle of the thermal wave signal changes when traversing downstream. The phase difference between the signals received downstream, compared with a reference excitation source signal is measured, and used to determine the flow rate of the fluid.
INTERNATIONAL SEARCH REPORT

A  CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A61 B 5/00 (201 0.01 )
USPC - 600/309

According to International Patent Classification (IPC) or to both national classification and IPC

B  FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
600/309

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
600/309, 301, 322, 32, 332, 368, 381, 73/202 5,204 11,204 12,204 13, 204 14,204 15,204 16,204 17,204 18,204 19,
204 22,204 23,204 24,204 25,204 26,204 27

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
USPTO Patent Collection and PG PUBS ; PubWEST, Google Scholar Terms low/flow, thermal, meter, anemometer, probe, frequency,
amplifier, noise, temperature sensor, low pass, channel, vein, artery, tube, passage, d' ameter, size, area, range, hot, thin, wire, manifold, Smith,
mark, barry, Fulkerson, Neil, xcorporeal

C  DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 6,487,904 A (Myhre) 3 December 2002 (03 12 2002) Col 6, ln 20-24</td>
<td>5-6, 15-16</td>
</tr>
</tbody>
</table>

1 Further documents are listed in the continuation of Box C

* Special categories of cited documents
  "A" document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search
18 March 2010 (18 03 2010)

Date of mailing of the international search report
13 APR 2010

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Form PCT/ISA/210 (second sheet) (July 2009)