Title: ODORS DISCRIMINATION BASED ON SPECTRAL SIGNATURES

Abstract: A method, apparatus and system to compare the odor characters of liquid and gaseous fragrance materials which are based on the comparison of the optical absorption spectrum in the UV to the near IR associated therewith. Samples of a compound having similar odor character have a greater resemblance in their optical absorption spectrum than samples of the same compound with a dissimilar odor character. Accordingly, the odor character of a fragrance material can be classified, authenticated and followed over time by optical absorption measurements.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G01N 33/497
US CL : 73/23, .23.24; 422/173

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)

U.S. : 73/23, .23.24; 422/173

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**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>A</td>
<td>US 4,563,893 A (TANYOLAC et al) 14 JANUARY 1986, see Abstract</td>
<td>1-28</td>
</tr>
<tr>
<td>A</td>
<td>US 5,090,232 A (WAKABAYASHI et al) 25 FEBRUARY 1992, see Abstract.</td>
<td>1-28</td>
</tr>
<tr>
<td>A</td>
<td>US 4,268,751 A (FRITZLEN et al) 19 MAY 1981, see Abstract</td>
<td>1-28</td>
</tr>
<tr>
<td>A</td>
<td>US 5,675,070 A (GELPERIN) 07 OCTOBER 1997, see Abstract</td>
<td>1-28</td>
</tr>
<tr>
<td>A</td>
<td>US 6,040,189 A (BUEHLER) 21 MARCH 2000, see Abstract</td>
<td>1-28</td>
</tr>
<tr>
<td>A</td>
<td>US 5,654,497 A (HOFFHEINS et al) 05 AUGUST 1997, see Abstract</td>
<td>1-28</td>
</tr>
</tbody>
</table>

*Further documents are listed in the continuation of Box C. See patent family annex.*

- **"A"** Special category of cited documents:
  - "A" document defining the general state of the art which is not considered to be of particular relevance
  - "E" earlier application or patent published on or after the international filing date
  - "L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  - "O" document referring to an oral disclosure, use, exhibition or other means
  - "P" document published prior to the international filing date but later than the priority date claimed
  - "T" later document published after the international filing date or priority date and not in conflict with the application but not cited to understand the principle or theory underlying the invention
  - "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
  - "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
  - "&" document member of the same patent family

**Date of the actual completion of the international search**

09 May 2002 (09.05.2002)

**Date of mailing of the international search report**

31 MAY 2002

**Name and mailing address of the ISA/US**

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Telephone No. 703-306-0661

**Facsimile No.** (703)305-3230

Form PCT/ISA/210 (second sheet) (July 1998)