



New connection on: : 31-08-2018 : 15:03:21 - Last disconnection on: : 31-08-2018 : 00:23:58

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

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 Database: EPODOC

[EPODOC: SS 1] breath and analyser

Results in EPODOC 63

[SS 2] 1 and device

Results in EPODOC 34

[SS 3] 2 and method

Results in EPODOC 10

[SS 4] ..li



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PN - [WO2018047058](#) A1 20180315

PR - PT20160109617 20160912

AP - WO20171B55322 20170905

DT - *; Rep

CT - |EP| ISR (A1)

[US2003079746](#) A1 20030501

[XA] (HICKLE RANDALL S [US])

[X] 1

* figures 1, 9A *

* paragraph [0120] *

[A] 2-7;

[US2001041366](#) A1 20011115

[X] (LEWIS NATHAN [US], et al)

[X] 1-7

* figure 1 *

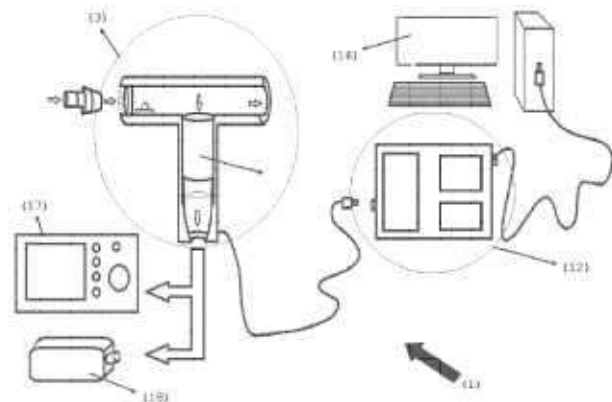


Figure 3

* paragraphs [0035] - [0037] - [041] , [0 52] , [0 93] , [0 94] *;
[US2008045825](#) A1 20080221
[X] (MELKER RICHARD J [US], et al)
[X] 1-7
* figures 5A, C *
* paragraphs [0089] , [0 93] , [102] , [157] *

CCI - [A61B5/7267](#) ; [A61B5/7475](#) ;
[A61B5/097](#) ; [G06F19/00](#)

CUI - [G16H50/20](#)

PA - FACULDADE DE CIENCIAS E
TECNOLOGIA DA UNIV NOVA DE
LISBOA [PT]; NMT [PT]

TI - SYSTEM FOR CONTROLLED AND
SELECTIVE SAMPLING OF EXHALED
AIR AND CORRESPONDING
OPERATING PROCEDURE

AB - The present application is
related with a system (1) and
respective **method** of operation,
for controlled and selective
sampling of exhaled air from a
predetermined part of the
respiratory tree. The system (1)
is comprised by two attachable
modules: a portable
sampling **device** (3) and a
hardware module (12),
controlled by a machine learning
software (16) loaded on a
processing **device**. The
technology developed detects
and imposes a breathing rhythm
to the subject according to its
characteristics (age, genre and
physiological condition) and to
synchronize the subject's
breathing cycle with a
representative modelled
breathing cycle using the
machine learning process (16).
Then, it is predicted the instants
for opening/closing the valve (9)
to conduct the selected **breath**
portion into the **analyser** (17) or
collector (18). The system (1)
disclosed allows monitoring,

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PN - [WO2016113353](#) A1 20160721

PR - GB20150000640 20150115

AP - WO2016EP50674 20160114

DT - **

CT - |EP| ISR (A1)
[WO2012064252](#) A1 20120518
[Y] (HOEK INSTR AB [SE], et al)
[Y] 1-5,8-12
* page 3, line 4 - line 40 *
* page 4, line 4 - line 8 *
* page 4, line 37 - line 42 *
* page 5, line 6 - line 26 *
* page 6, line 33 - line 37 *
* figures 1,3, *;
[US2014165697](#) A1 20140619
[YA] (MOCHIZUKI KEI [JP], et al)
[Y] 1-5,8-12
* paragraph [0117] *
* paragraph [0123] *
* paragraph [0171] -
paragraph [0172] *
* paragraph [0263] *
* paragraph [0269] *
[A] 6,7,13,14

CCI - [A61B5/082](#) ; [A61B5/0836](#) ;
[A61B5/087](#) ; [G01N33/4972](#)

PA - AUTOLIV DEV [SE]; HÖK BERTIL
[SE]; STEGGO JACOB [SE]; GESTER
RAIMO [SE]

TI - A **BREATH ANALYSER DEVICE AND
ARELATED METHOD**

AB - A tamper evident **breath analyser
device** is proposed which has an
inlet region and a sensor
arrangement, the inlet region
being configured to receive
a **breath** sample from a test
subject via an inlet port and
direct the sample to the sensor

[illegible]

arrangement, and the sensor arrangement being configured to provide a signal representative of the concentration of a volatile substance within said sample. The **device** is characterised in that said inlet region includes an inlet microphone adjacent said inlet port, the microphone being positioned and operable to provide an acoustic signal representative of local pressure variations arising from an air flow produced by an exhaled **breath** sample directed through the sample inlet port. The **device** further comprises a processor operable to analyse at least a portion of said acoustic signal and produce a signal indicative of an untampered **breath** sample in dependence on said analysis. A related tamper-evident **method** of analysing a **breath** sample is also disclosed.

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PN - [WO2016102973](#) A1 20160630

PR - GB20140023146 20141223

AP - WO2015GB54155 20151223

DT - **

CT - [EP] ISR (A1)
[WO2010070360](#) A1 20100624

[XY] (DINKEYS LTD [GB], et al)

[X] 1,2,4-6,10,11,13,15,16

* page 1, line 3 - line 6 *

* page 3, line 14 - page 5, line 32 *

* page 6, line 25 - line 32; figure 1 *

* page 8, line 1 - page 10, line 21 *

* page 12, line 27 - line 32 *

* page 14, line 4 - page 15, line 25 *

[Y] 3,7,8,12,14;

[WO2007135423](#) A1 20071129

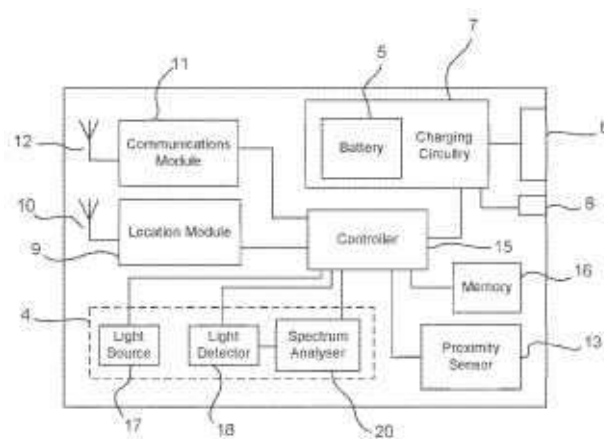


Figure 2

[Y] (QINETIQ LTD [GB], et al)
[Y] 7,8
* page 1, line 4 - line 8 *
* page 4, line 13 - page 5,
line 13 *
* page 6, line 27 - line 32 *
* page 10, line 14 - line 31;
table 1 *;
[EP2123060](#) A1 20091125
[XYI] (GEORGIA TECH RES INST
[US])
[X] 30-35
* paragraph [0001] *
* paragraph [0029] -
paragraph [0033] *
* paragraph [0042] -
paragraph [0049] *
* paragraph [0075] -
paragraph [0077] *
* figures 1,2,3 *
[Y] 3,12,14
[I] 36;
[WO2004005088](#) A1 20040115
[X] (MARRIOTT PAUL [GB])
[X] 1,4,6,7,10,11,13,15,30
* page 3 - page 5 *
* page 7, paragraph 2 *
* page 8 *
* figures 1,2,4 *;
[US6344798](#) B1 20020205
[A] (SCHELL MICHAEL B [US])
[A] 1-37
* the whole document *

- CCI - [G08B21/14](#) ; [G08B21/22](#) ;
[G08B25/08](#) ; [G08B29/183](#)
- PA - PAN OPTIC MONITORING LTD [GB]
- TI - APPARATUS AND **METHOD** FOR
ALERTING THE PRESENCE OF
PEOPLE IN AN ENCLOSED SPACE
- AB - A portable gas detector
comprises a sensor configured
to detect one or more gases in an
enclosed space and to generate
an alert in response to an alarm
condition, a location
module, **device** or chip, such as a
Global Positioning Systems (GPS)
unit, and a communication

module, **device** or chip configured to transmit the alert and the location to a base station. The portable gas detector may include a light source, a light detector arranged to receive light from the light source that has passed through gases in the enclosed space and a spectrum **analyser**. The light source may be adjustable to tune the wavelength of its light, to permit detection of different gases. The gas detector may be configured to monitor carbon dioxide in a vehicle to detect the presence of people through their exhaled **breath**, or used to detect explosives or deterioration in perishable goods, such as rotting food, in a container or vehicle.

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PN - [EP3106872](#) A1 20161221
 PNFP - EP3106872 B1 20170809
 PR - EP20150172431 20150616
 AP - EP20150172431 20150616
 DT - *; Rep
 CT - || STSE (A1)
[JP2008191871](#) A 20080821
 [X] (TOYOTA MOTOR CORP)
 [X] 1-6,10-15
 * paragraphs [0019] - [0021] - [0025] , [0044] - [0049] - [0055];
 figures 1,2,5,8 *;
[JP2011220759](#) A 20111104
 [X] (TOYOTA MOTOR CORP)
 [X] 1-4,6-13,15-18
 * paragraphs [0022] , [0023] , [0030] , [0031]; figures 1-3 *;
[JP2009090691](#) A 20090430
 [X] (TOSHIBA CORP)
 [X] 1-3,6,10-12,15
 * paragraphs [0011] - [0015];
 figures 1-3 *;
[US2008170762](#) A1 20080717
 [X] (ENDO TAKESHI [JP], et al)

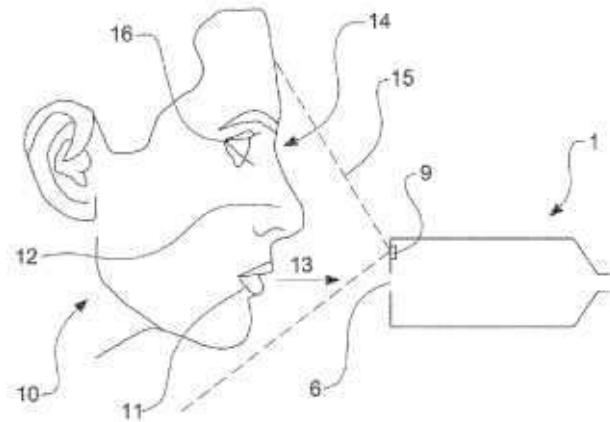


FIG 2

[X] 1,2,6,10,11,15

* abstract *

- CCI - [G01N33/4972](#)
- CUI - [B60K28/063](#)
- PA - (A1 B1)
AUTOLIV DEV [SE]
- TI - (A1 B1)
A **BREATH ANALYSER DEVICE** AND
ARELATED **METHOD**
- AB - (A1)
There is disclosed a tamper
evident **breath analyser device**
(1) having an inlet region (2) and
a sensor arrangement, the inlet
region (2) being configured to
receive a **breath** sample from a
test subject via an inlet port (6)
and direct the sample to the
sensor arrangement, and the
sensor arrangement being
configured to provide a signal
representative of the
concentration of a volatile
substance within said sample.
The **device** (1) includes an
imaging **device** (9) arranged and
configured to capture images of
a test subject's face (14) when
the **device** (1) is in use and
positioned to receive a **breath**
sample from the test subject (10)
via said inlet port (6). The **device**
(1) also has a processor unit
(22) operable to analyse said
images and produce a signal
indicative of an
untampered **breath** sample in
dependence on said analysis. An
associated **method** is also
disclosed.

PN - [GB2534173](#) A 20160720

PNFP - GB2534173 B 20170118

PR - GB20150000640 20150115

AP - GB20150000640 20150115

DT - *; Rep

CT - || STSE (A B)
[GB1410103](#) A 19751015 [
] (BORG WARNER);
[WO9820346](#) A1 19980514 [
] (SERVOTEK AB [SE], et al);
[US6726636](#) B2 20040427 [
] (DER GHAZARIAN VIKEN [US], et al);
[US5734090](#) A 19980331 [
] (KOPPEL RONALD [US], et al);
[US5376555](#) A 19941227 [
] (FORRESTER GLENN C [US], et al);
[US2014165697](#) A1 20140619 [
] (MOCHIZUKI KEI [JP], et al);
[US2013231871](#) A1 20130905 [
] (HOK BERTIL [SE], et al);
[US2013070043](#) A1 20130321 [
] (GEVA NIR [IL], et al);
[US2008061238](#) A1 20080313 [
] (HOK BERTIL [SE], et al)

CCI - [A61B5/082](#) ; [A61B5/0836](#) ;
[A61B5/087](#) ; [G01N33/4972](#)

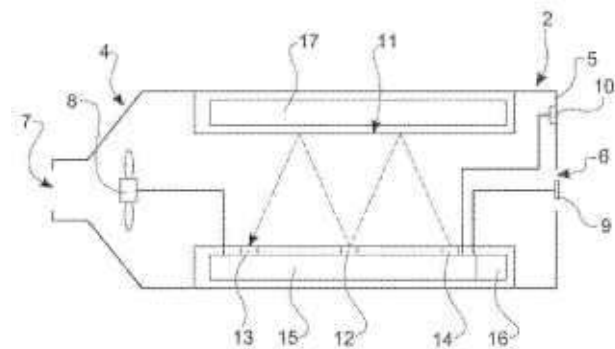
CNOI - (A B)
[A61B5/18](#) ; [B60K28/06](#) ;
[G01N33/4972](#)

PA - (A B)
 AUTOLIV DEV [SE]

TI - (A B)
 A **breath analyser device** and a related **method**

AB - (A)
 A tamper evident volatile substance **breath analyser** has inlet port 6 and adjacent microphone 9, positioned to measure pressure variations arising from an exhaled sample air flow. At least a portion of the sound signal is analysed to determine whether an untampered **breath** specimen is being provided, which may be

FIG 2



indicated by dominance of frequencies below 400Hz. The breathalyzer may also include a carbon dioxide sensor 12, the acoustic waveform being stored in a buffer 16 before a portion, corresponding to a relevant predetermined time period, is analyzed when CO2 concentration reaches a threshold value. A second microphone 10 may monitor ambient noise, allowing for subtraction from the main signal. The **device** prevents false negatives being given, for example should a user attempt to defraud the test by delaying alcohol-polluted **breath** from entering the **device** by using a tube.

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PN - [AU2013201381](#) A1 20131107
 PNFP - AU2013201381B B2 20150507
 PR - DE20121008165 20120424
 AP - AU20130201381 20130308
 DT - I
 CT - || STSE (B2)
 [US2004088096](#) A1 20040506 [
] (STOCK BURKHARD [DE], et al);
 [US2006238362](#) A1 20061026 [
] (MOBLEY LARRY J [US], et al);
 [DE10251281](#) B3 20040603 [
] (DRAEGER SAFETY AG & CO
 KGAA [DE]);
 [US2011193708](#) A1 20110811 [
] (COMEAU FELIX J E [CA])
 CCI - [A61B5/6893](#) ; [A61B5/082](#) ;
 [A61B5/18](#) ; [B60K28/06](#) ;
 [B60K28/063](#)
 CCA - [A61B5/1112](#) ; [B60W2540/24](#)
 PA - (A1 B2)
 DRAEGER SAFETY AG & CO KGAA
 TI - (A1 B2)
 Device and **method** for providing
 a **breath** sample with a **breath**-



alcohol interlock **device**

AB - (A1 B2)

Abstract **Device** and **method** for providing a **breath** sample with a **breath**-alcohol interlock **device** A **device** to prevent the starting of a vehicle comprising a **breath** gas **analyser** (5) that is arranged inside the vehicle and is designed to measure the **breath** alcohol content of an operator is to be improved in such a way IU that a repeat test can be performed without it having a negative impact on the operator. To meet this object a control unit (1) is provided, which is connected to the **breath** gas **analyser** (5), the movement sensor (4) and an ignition system (3) of the vehicle, and which requests a 15 **breath** alcohol test at a pre-determinable time t_w in such a way that the **breath** alcohol test takes place with the vehicle at a standstill, in which the control unit (1) is also designed to preset a time interval as latency time t_{lat} , starting from the time t , within which the vehicle must be brought to a standstill. (Figure 1)

Fig. 1

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PN - [RU2436602](#) C2 20111220

PR - RU20090146335 20080515

AP - RU20090146335 20080515

DT - I

PA - NAUMOV SERGEJ ALEKSANDROVICH [RU]

TI - **METHOD** OF INHALATION AND **DEVICE** FOR IMPLEMENTATION THEREOF

AB - FIELD: medicine. ^ SUBSTANCE: invention refers to medicine, and can be used if application of inert gases required. Fir this purpose, a **method** of gas mix inhalation is offered. The procedure is performed "on an empty stomach" with underlying patient's total blood cholesterol ≤ 5 mmol/l. Warm water is preliminary taken. The patient is placed in a dorsal position with a lowered head end. It is followed by intensive lung air ventilation with maximally deep air exhalation in the environment and **breath** holding

at exhalation peak. After that the patient breathes with a gas mixture of xenone and oxygen supply from a closed loop apparatus to the oxygen content in the mixture not less than 20 % and until observing gas effect symptoms. Also, the inhalation **device** using the gas mixture of xenone and oxygen also is offered The **device** contains a closed breathing circuit which involves a gas distribution unit connected through an inhalation/exhalation main with a patient's breathing mask, and also connected to a gas **analyser**. Xenone and oxygen sensors are integrated in the gas distribution unit. Also, the **device** comprises a breathing tank placed on the inhalation/exhalation main between the mask and the gas distribution unit, a CO2 absorber, a gas supply unit and a recovery unit. ^ EFFECT: group of inventions allows reducing xenone consumption ensured by faster onset of the blood saturation symptoms owing to the patient's preparation providing decreased hematocrit level and intensified blood flow to brain. ^ 5 tbl, 3 dwg, 4 ex, 11 cl

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PN - [WO2009139657](#) A1 20091119

PR - WO2008RU00300 20080515

AP - WO2008RU00300 20080515

DT - *; Rep

CT - |RU| ISR (A1)

[RU2317112](#) C1 20080220

[A] (NAUMOV SERGEI

ALEKSANDROVICH);

[RU59415U](#) U1 20061227

[A] (NAUMOV SERGEI

ALEKSANDROVICH);

[US2008029091](#) A1 20080207

[A] (MULLNER RAINER [AT])

CTNP - |RU| ISR (A1)

[A] - BUROV N.E. ET AL., "Ksenon v anesteziologii", PULS, MOSCOW, (2000), pages 134 - 135,

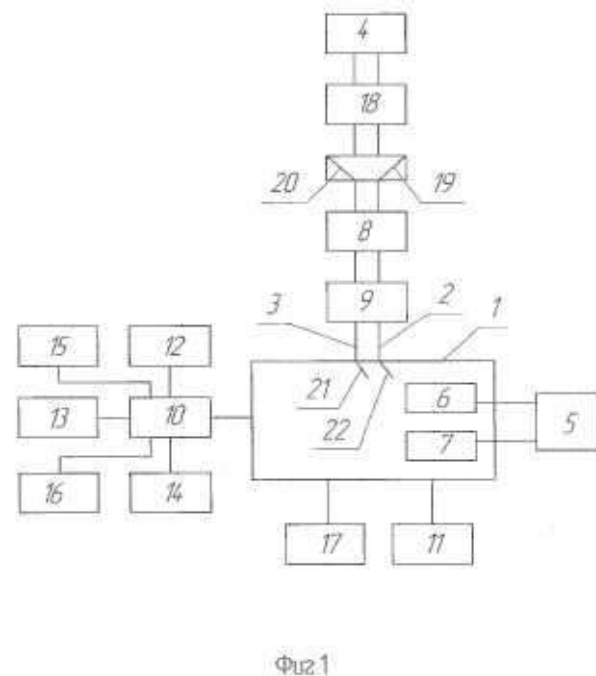
[A] - BEIN B. ET AL., "Xenon-the ideal anaesthetic agent?", ANASTHESIOLOG INTENSIVMED NOTFALLMEDSCHMERZTHER, (200711), vol. 42, no. 11, pages 784 - 91,

CCI - [A61M16/12](#)

CCA - [A61M16/06](#) ; [A61M2016/102](#) ; [A61M2202/0208](#) ; [A61M2202/0291](#)

PA - NAUMOV SERGEI
ALEKSANDROVICH [RU]

TI - INHALATION **METHOD** AND
A **DEVICE** FOR CARRYING OUT



SAID METHOD

AB

- The invention relates to medicine. The inhalation **method** involves the intensive lung ventilation followed by a full inspiration and a **breath** holding. Then, a patient respires a xenon and oxygen mixture supplied by a closed circuit apparatus until the oxygen content in the mixture arrives at 20% and the gas effect becomes evident. Breathing of the gas mixture is carried out on an empty stomach and when the blood cholesterol is ≥ 5 mmol/l. Prior to inhalation, the patient drinks warm water and during the procedure lies on his back with the head end lowered. The **device** for carrying out said **method** comprises a gas distribution unit connected to the patient's breathing mask via an inspiration-expiration line and with a gas **analyser**, the sensors of which are placed inside the gas distribution unit which is in form of a monoblock with channels perforated therein for distributing the gas mixture and for supplying it to the inspiration-expiration line, the gas **analyser** sensors and to a collecting unit. A respiratory reservoir is disposed between the inspiration-expiration line and the gas distribution unit.

PN - [GB2374537](#) A 20021023

PNFP - [GB2374537 B](#) 20050413
- [GB2374537 C](#) 20110615

PR - [GB20010004692](#) 20010226

AP - [GB20020004434](#) 20020226

DT - **

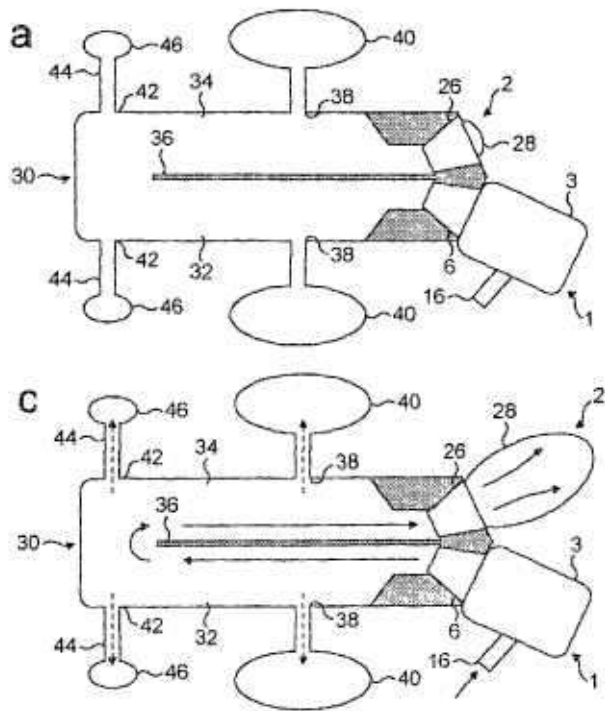
CT - || STSE (A)
[US5335656](#) A 19940809 [
] (BOWE EDWIN A [US], et al);
[US6155986](#) A 20001205 [
] (BRYDON JOHN WILLIAM
ERNEST [AU], et al);
[WO9853869](#) A1 19981203 [
] (DIRECT HALER A S [DK], et al);
[WO0006020](#) A1 20000210 [
] (RHINOMETRICS A S [DK], et al)
- || STSE (B)
[EP0824023](#) A1 19980218 [
] (MICROFLOW ENG SA [CH]);
[US5335656](#) A 19940809 [
] (BOWE EDWIN A [US], et al);
[US6155986](#) A 20001205 [
] (BRYDON JOHN WILLIAM
ERNEST [AU], et al);
[WO9853869](#) A1 19981203 [
] (DIRECT HALER A S [DK], et al);
[WO0006020](#) A1 20000210 [
] (RHINOMETRICS A S [DK], et al);
[WO0051672](#) A1 20000908 [
] (DJUPESLAND PER GISLE [NO])

CCI - [A61B5/085](#) ; [A61M11/005](#) ;
[A61M15/0065](#) ; [A61M15/009](#) ;
[A61B5/415](#) ; [A61M15/08](#) ;
[A61B5/4839](#) ; [A61M11/001](#) ;
[A61M11/007](#) ; [A61M15/0098](#)

CUI - [A61M11/02](#) ; [A61M11/006](#) ;
[A61M15/002](#) ; [A61M15/0021](#)

CCA - [A61B5/097](#) ; [A61M15/0091](#) ;
[A61M2016/0021](#) ;
[A61M2202/064](#) ;
[A61M2205/071](#) ;
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[A61M2205/13](#) ;
[A61M2210/0668](#) ;
[A61M2230/43](#)

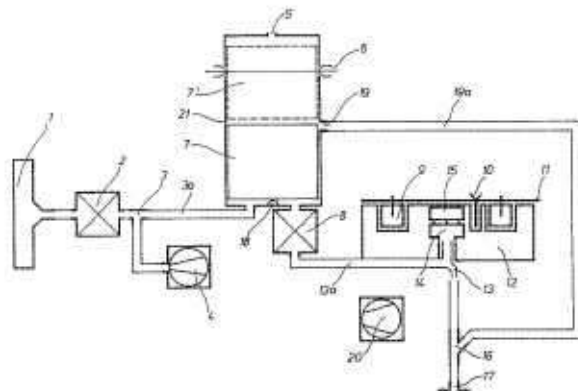
CUA - [A61M2202/04](#)



- PA - (A B C)
OPTINOSE AS [NO]
- TI - (A)
Breath activated nasal delivery devices comprising a **breath analyser**
- (B C)
Nasal devices
- AB - (A)
A nasal delivery **device** for delivering at least one substance to the nasal cavity of a subject, including a delivery unit 20 comprising a nosepiece 21 for fitting to the nostril of a subject, a mouthpiece 23 through which the subject exhales, a **breath analyser** 29 for analysing the concentration of at least one component in exhaled air from an exhalation **breath** and a substance supply unit 31 for supplying at least one substance, the substance supply unit 31 including a control unit 35 for controlling the same to control supply of the at least one substance in response to the detected concentration. In another aspect, a nasal resistance measurement **device** and a **method** of determining a flow resistance of a nasal airway of a subject.

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- PN - [EP0510484](#) A2 19921028
- PNFP - EP0510484 A3 19940720
- PR - DE19914113199 19910423
- AP - EP19920106379 19920414
- DT - *; Rep
- CT - || STSE (A3)
[AU6136169](#) A 19710325
[XY] (RAYMOND CLARE NOWLAND)
[X] 1-3,5,7,10,11
* the whole document *



[Y] 4,6,8,12;
[US3622278](#) A 19711123
 [XY] (ELZINGA WILLIAM E, et al)
 [X] 1-3,5,7,10,11,14,15
 * the whole document *
 [Y] 6;
[FR2378279](#) A1 19780818
 [Y] (STUITJE CORNELIS [NL])
 [Y] 4,12
 * the whole document *;
[US3853477](#) A 19741210
 [Y] (SPAMPANATO G, et al)
 [Y] 8
 * column W *

- CCI - [G01N33/4972](#)
- PA - (A2)
 RETRONIC GMBH [DE]
 - (A3)
 RETRONIC GMBH [FR]
- TI - (A2)
Method and apparatus for the determination of blood alcohol content by analysis of **breath**.
 - (A3)
METHOD AND APPARATUS FOR THE DETERMINATION OF BLOOD ALCOHOL CONTENT BY ANALYSIS OF **BREATH**
- AB - (A2)
 The **method** is carried out using a measurement apparatus which is arranged in an automatic **device**, where the **breath** is blown into an input of a sensor and, in conjunction with an electronic **analyser**, the blood alcohol content is displayed. In order to avoid manipulations and to achieve a high accuracy, it is provided that the **breath** is initially stored, in accurate dosage in amounts which are always identical, and then passed to the sensor with uniform pressure. <IMAGE>