The invention is related to an enclosed laparoscopic morcellation bag (1) and usage method thereof; wherein said laparoscopic morcellation bag enables, to prevent complications that might occur due to scattering of the specimen (S) that has been broken into pieces via the usage of morcellator devices (M) when extracting solid materials out of the abdomen (A) and makes it easier to extract said specimen (S) (sample) located inside the abdomen (A) (abdominal region) during laparoscopic operations.
A LAPAROSCOPIC ENCLOSED MORCELLATION BAG AND ITS Usage Method

Technical Field
The invention is related to an enclosed laparoscopic morcellation bag and usage method thereof; wherein said laparoscopic morcellation bag enables, to prevent complications that might occur due to scattering of the specimen that has been broken into pieces via the usage of morcellator devices when extracting solid materials out of the abdomen, and makes it easier to extract out the specimen (sample) located inside the abdomen (abdominal region) during laparoscopic operations.

Prior Art
Laparoscopic surgery which is a method that has been progressing rapidly and has been becoming more widespread in the field of surgery, is frequently chosen with each passing day in the gynaecologic surgery field as in all surgical fields. Laparoscopic surgeries are operations carried out by means of a camera and metal tubes (trocar-port) that are as wide as a pen, wherein said camera and tubes are inserted from a few pre-determined points of the body. In the case that laparoscopic surgeries are carried out in comparison to the wide/large incisions in traditional applications, the recovery of the patient is much faster and the patient can quickly return back to his/her daily life.

One of the most important problems of laparoscopic surgery is that the diseased tissue (specimen) that is desired to be taken out of the abdomen of the patient following surgery cannot be taken out of the abdomen region easily. It is almost impossible to especially extract the solid tissue out of the abdominal region. For this reason, devices that are used to break up said tissue or solid masses during their extraction from the abdominal region (abdomen), called morcellators are used. Laparoscopic morcellators are used when extracting the uterus out of the
abdomen following subtotal hysterectomy operations and myomas following
myomectomy operations in the gynaecology field, and the material that is to be
extracted out is morcellated with a morcellator inside the abdomen before they are
taken out of the abdomen. During this morcellation process carried out inside the
abdomen via a morcellator there is a risk for the diseased tissue to be scattered
 uncontrollably inside the abdomen. There is especially a risk of scattering of the
myometrial sarcoma following myomectomy operations and a risk of scattering of
the uterus sarcoma inside the abdomen following subtotal hysterectomy
operations and also a risk of developing parasitic myoma. For this reason, several
leading international gynaecologic endoscopy organizations and foremost the
FDA, have been publishing declarations advising users of the laparoscopic
morcellation method to be careful during usage.

Various methods have been developed in order to extract the specimen out of the
abdomen in the known state of the art. Said methods are generally based on
placing said specimen inside various enclosed or open bags and morcellating said
specimen inside said bags and the extracting said specimens located inside said
bags out of the abdomen. However the usage of these materials also extends the
time of the operation and creates technical complications. During morcellating
procedures carried out with bags that are not enclosed, it is difficult to insert said
bags into the abdomen as large bags are used most of the time. It is a difficult
procedure to suitably position these large sized bags inside the abdomen and to
receive the specimen into the bag from the opening of the bag and such
procedures require advanced surgical ability and experience. Moreover there is
still a risk of scattering of the disease inside the abdomen when morcellation is
carried out inside a non-enclosed bag, similar to the risk of scattering when a bag
is not used. It is a difficult and complex procedure to seal the opening of the bag
inside the abdomen following the morcellation process and to extract the bag out
of the abdomen.
The difficulties in carrying out the morcellation application inside an enclosed bag are as follows:

1. Large sized bags are used and it is difficult to insert said bags into the abdomen,
2. Advanced surgical ability and experience is required in order to open the mouth of the bag following its insertion into the abdomen and to receive the specimen inside the bag,
3. The monitoring of the process via different ports using different sized laparoscopic cameras when receiving the specimen inside the bag makes the process more complicated and the process of changing the cameras extend the duration time of the surgical procedure,
4. The opening of the bag is closed after the specimen is received into the bag and different cameras are needed when extracting the bag out of the abdomen,
5. After the bag whose mouth is positioned outside of the abdomen is inflated, the bag needs to be pierced with a different trocar inside the abdomen and the trocar needs to be inserted therein, and as the camera is located inside the bag during this process, said process is carried out in a half blind state and said piercing procedure creates a risk of intraabdominal injury inside the abdominal space,
6. After the bag is pierced with a different trocar and said trocar is inserted therein, it is mandatory to use this single type trocar and the bag is required to be clamped between the trochar and the abdominal wall.
7. Following this stage, the camera is changed and the morcellation process is carried out, after the morcellation process, a different camera is used when the bag is being extracted out of the abdomen; precautions need to be taken at this exact moment when the bag is being extracted out of the abdomen in order to prevent the scattering of the specimen or fluid material from the pierced section of the bag where the trocar had been inserted. The complexity of the process is increased as all of said procedures need to be carried out simultaneously.
documents within the known state of the art describe the procedure where the morcellated specimens are taken out of the abdomen following morcellation during laparoscopic surgery.

**Brief Description of the Invention**

The aim of the invention is to provide a laparoscopic enclosed morcellation bag which is small and inflatable, being produced from an elastic material, which enables to perform morcellation inside said bag after the specimen is received therein.

Another aim of the invention is to provide a laparoscopic enclosed morcellation bag having finger like protrusions extending out of the outer surface that can be easily taken out of the ports that are used laparoscopically and where laparoscopic instruments and morcellators can be inserted therein after the bag is easily extracted out by means of said finger like protrusions.

Another aim of the invention is to provide a laparoscopic enclosed morcellation bag which shortens the operation time.

**Detailed description of the Invention**

"A laparoscopic enclosed morcellation bag" that has been provided in order to reach the aims of the present invention has been shown in the attached figures, wherein said figures illustrate the following:
Figure 1- Is the schematic view of the specimen that has been cut off from the tissue of the patient before laparoscopic morcellation.

Figure 2- Is the schematic view of the laparoscopic morcellation bag subject to the invention where the bag is inserted inside the abdomen over the skin incision by means of twisting the apparatus used to open the mouth of the bag.

Figure 3- Is the schematic view of the laparoscopic morcellation bag subject to the invention where the bag is inserted into the abdomen having an opening that is not enclosed.

Figure 4- Is the schematic view of the laparoscopic morcellation bag subject to the invention during the process where the specimen is being received inside the bag via a laparoscopic instrument while said process is being monitored with a camera.

Figure 5- Is the schematic view where the specimen is being received inside the laparoscopic morcellation bag.

Figure 6- Is the view of the process where the opening of the laparoscopic morcellation bag is pulled out of the abdomen by means of a laparoscopic instrument.

Figure 7- Is the schematic view of the morcellation process being monitored with a camera located inside the laparoscopic morcellation bag subject to the invention.

Figure 8- Is the schematic view of the laparoscopic morcellation bag subject to the invention at an extracted state, being extracted from the abdominal region, following the morcellation process.

Figure 9- Is the perspective view of the clamp design at an open position which is used to clamp the opening of the bag.

Figure 10- Is the perspective view of the clamp design at a closed position which is used to clamp the opening of the bag.

The parts in the figures have each been numbered and their references have been listed below.

1. Laparoscopic enclosed morcellation bag
2. Body
3. Opening
4. Mouth opening apparatus
5. Protrusions
6. Clamp
   6.1. Fixed section
   6.2. Mobile section
A. Abdomen
C. Camera
M. Morcellator
P. Port
S. Specimen
L. Laparoscopic instrument

The laparoscopic enclosed morcellation bag (1) subject to the invention is a bag which makes it easier to extract the specimen (S) located inside the abdomen (A) (abdominal region) during laparoscopic surgical operations, and prevents the occurrence of complications due to the scattering of the specimen (S) into the abdomen (A) during the usage of morcellator (M) devices (M) when extracting solid materials out of the abdomen; wherein said bag comprises the following

- At least a body (2) that is inflatable by gas produced from elastic material, forming an artificial volume wherein a morcellation process can be carried out therein, by means of being inflated by gas after said bag has been inserted into the abdomen (A) and wherein said body acts as an enclosed and impermeable chamber such that it prevents the specimen (S) received inside it to be scattered in the abdomen (A),

- At least an opening (3) located at the section of the body (2) of the bag facing the specimen (S), that is opened following the insertion thereof into the abdomen (A) through a port (P) incision enabling to receive the specimen (S) into the body (2),

- At least a mouth opening apparatus (4) positioned on the opening (3) section, which can be easily twisted and bent and which can return back to
its former state if the pressure applied thereon is ceased, therefore being able to open on its own after it has been twisted and inserted into the abdomen (A) thereby also opening the mouth (3) section of the bag,

- At least a protrusion (5) extending out of the surface of the body (2), having a shape of a channel connected with the inner section of the body (2), having a closed end, where said closed end can be taken out of the abdomen (A) by means of a clamp over the skin incisions located on the abdomen (A), where said protrusion can act as a channel into which laparoscopic apparatus can be inserted into the body (2) after said closed ends are cut off.

The mouth opening apparatus (4) according to a preferred embodiment of the invention is inserted into the mouth section (3) and clamps around the opening.

According to another embodiment of the invention the mouth opening apparatus (4) is integrated with the opening (3).

According to another application of the invention several protrusions (5) are provided in order to be able to use different laparoscopic instruments (L), whereby said protrusions are taken out of the abdomen by means of a clamp via different ports (P) and where said protrusions act as channels that extend into the body (2) after the closed ends of the protrusions are cut off.

According to another application of the invention at least a clamp (6) is provided; said clamp, clamps the walls of the mouth section (3) and or the protrusion (5) such that they are in contact with each other, and located on the protrusions (5) whose closed ends have been opened by cutting off said ends and/or the mouth (3), in order to prevent small tissue parts and fluid located inside the body (2) of the bag following the morcellation process to be scattered into the abdomen (A); and wherein it comprises a fixed section (6.1) positioned inside the walls and at least a mobile section (6.2) which clamps the walls at the fixed section (6.1) by
being attached to the fixed section (6.1) at one end and by being rotated at said axis.

In another embodiment of the invention the mouth section (3) is closed by means of the surgeon pulling a draw string outside the abdomen (A) where said string has been inserted through the constriction channel located around the mouth.

Usage method of the laparoscopic enclosed morcellation bag (1) subject to the invention which enables the Specimen (S) that has been cut off from the tissue at the early stages of the operation during laparoscopic surgeries to be taken out of the abdomen; comprising the following steps:

- After cutting of the specimen (S) from the healthy tissue, both one of the laparoscopic instruments which was used during the cutting of the specimen, and the port (P) where the laparoscopic instrument (L) inserted into the abdomen were removed through the skin incision,

- Inserting first of all the twisted mouth opening apparatus (4) the mouth (3) and then the body (2) of the bag through the skin incision,

- Opening of the mouth opening apparatus (4) and in turn the mouth (3) of the bag once the pressure applied on the bag inside the abdomen (A) is released,

- Leaving at least one of the protrusions (5) located on the body (2) out of the abdomen (A) through the skin incision where the body (2) has been inserted therethrough,

- Receiving the Specimen (S) into the body (2) from the opening (3) by means of a laparoscopic instrument (L) that is inserted through a port (P) and monitoring said process at the same time by means of a camera (C) that has been inserted through another port (P),

- Extracting out the mouth opening apparatus (4) and in turn the opening (3) from the abdomen (A) by means of a laparoscopic instrument (L) and then detaching the port (P) and the camera (C) that has been inserted through said port at the same time,
Extracting the port (P) and the camera (C) that has been inserted through said port out of the skin incision,

- Inserting the port (P) and the camera (C) into the opening (3) extending out of the abdomen (A),

- Forming an artificial volume by feeding gas into the body (2) through the opening (3),

- Cutting off of the end of the protrusion (5) that has been left out,

- Inserting a morcellator (M) into the body (2) through the cut end of the protrusion (5),

- Morcellating the specimen (S) located inside the body (2) with a morcellator (M), while observing said process with a camera (C),

- Sealing off the end of the protrusion (5) such that it is impermeable after taking the morcellator (M) passing through said protrusion (5) out of the protrusion channel,

- Extracting the body (2) having the specimen (S) pieces and fluids via the opening (3) that has been left outside the abdomen (A).

According to a preferred application of the invention, the end of the protrusion (5) that has been cut off and opened is sealed off impermeably with a suture in order to prevent small tissue pieces and fluid located in the body (2) to be scattered inside the abdomen (A) following the morcellation process.

The organ or diseased tissue that is to be extracted out of the abdomen during laparoscopic surgeries is separated from the tissues they are bound to, during an operation by cutting and coagulation procedures. Following this stage, the organ or diseased tissue that is to be taken out of the abdomen shall remain inside the abdomen at a free state. The specimen (S) that is no longer attached to an organ or tissue, is received into the laparoscopic enclosed morcellation bag (1) and the process to extract the bag out of the abdomen (A) is started.
At least three ports (P) having a diameter of 5mm is inserted at the abdominal region in order to carry out the laparoscopic surgical operation, and the diameter of the middle port is expanded up to 12-15mm in order to first of all insert the laparoscopic enclosed morcellation bag (1) subject to the invention and then the camera (C) into the abdomen (A). The bag is inserted into the abdomen (A) through the skin incision opened by means of an elastic metal apparatus and the opening (3) is opened. The specimen (S) is inserted into the body (2) via the open mouth section (3). The protrusions (5) that are provided to pass the morcellator (M) and other laparoscopic instruments into the body (2) are extended out from the abdomen (A) via the ports (P) using metal instruments and the closed ends that extend out of the abdomen (A) are cut off thereby providing channels that reach into the body (2). At this stage C02 gas is fed inside the body and an artificial volume is created in which the morcellation process shall be carried out. Once the morcellation procedure is completed, the lumen of the protrusion (5) through which the morcellator (M) is passed into the bag (1) shall be sealed off. Following the sealing off of the lumen of the protrusion (5) through which the morcellator (M) is passed into the bag (1), the bag (1) and the tissue parts, fluid and blood located inside the bag are extracted out of the abdomen (A) from the skin incision that corresponds to the belly button.

As the laparoscopic enclosed morcellation bag (1) is silicon based, it shall open on its own once it is inserted into the abdomen (A). Once the latex based inflatable bag (1) is opened, the tissue/mass that is desired to be received through the opening (3) shall be placed into the bag (1). The laparoscopic enclosed morcellation bag (1) can be produced from a latex, nonoxynol-9, lambistic polyurethane, poliisopropylene material.

The laparoscopic enclosed morcellation bag (1) subject to the invention shall be inserted into the abdomen (A) through the trocar incision section. The morcellation bag (1) that is received into the abdomen (A) easily through the trocar incision point, having a small size before being inserted into the abdomen
shall be inflated after the specimen (S) inside the abdomen (A) is received into the bag, by means of its flexible inflatable structure different to the traditional applications and by this means the sufficient volumetric area for the morcellation shall be obtained following inflation of the bag.

The size of the morcellation bag (1) shall shrink again after the gas inside the bag is discharged following the morcellation procedure and therefore the bag shall be able to be extracted easier out of the abdomen (A) in comparison to traditional applications.

The laparoscopic enclosed morcellation bag (1) subject to the invention comprises 3-4 protrusions (5) shaped like fingers that extend out of the outer surface of the bag, and show continuity with the content of the bag (1). After the morcellation bag (1) is inserted into the abdomen (A), the mouth of the bag inside the abdomen (A) shall open and the specimen (S) shall be received into the bag. The protrusions (5) located on the morcellation bag (1) shall be grasped with laparoscopic instruments and shall be extracted out of the abdomen (A) from the skin incision points. Similarly the opening (3) is also extracted out of the abdomen via laparoscopic grasping tools. The opening (3) taken out of the abdomen (A) shall be opened and the camera (C) and the port (P) that is passed through shall be passed over said opening (3). The bag (1) is inflated with air and the camera (C) is inserted into the bag by means of a port (P) that has been placed inside the bag (1) that has been inflated.

The top section of the protrusion (5) into which the morcellator (M) shall be inserted through is cut off, where the morcellator bag shall be taken out of the abdomen (A) using said protrusions (5) which resemble fingers and, the morcellator (M) is inserted into the body (2) of the morcellator bag (1) via the finger like protrusions (5). If necessary, one of the protrusions (5) resembling a finger shall be taken out of the abdomen (A) from the skin incision and a different
laparoscopic instrument (L) can be inserted into the body (2) from the cut off end of the protrusion similar to the insertion process of the morcellator (M).

At this stage the specimen (S), camera (C) and the morcellator (M) is located inside the bag (1). Therefore a second artificial volume shall be formed inside the abdomen and the specimen (S) shall be morcellated under direct optical observation and shall be extracted out of the abdomen (A).

Small tissue parts and fluid waste shall remain inside the bag (1) following the morcellation procedure. The bag shall be extracted out of the abdomen (A) following the morcellation procedure and the open end of the protrusion (5) into which the morcellator (M) had been inserted, shall be sealed with a suture. As a result spillage dissemination and/or fluid dissemination or the passage of tissue pieces into the abdomen (A) during the extraction of the morcellation bag (1) out of the abdomen (A) is prevented.

Finally the air inside the body (2) is discharged over the camera (C) port (P) and the size of the morcellation bag (1) is then shrunk such that the bag can be easily re-extracted out of the trochar incision point. The camera port (P) and the camera (C) is extracted out of the abdomen (A), and the morcellation bag (1) is pulled out of the abdomen (A) through the skin incisions by gripping the opening (3) of the bag. First of all the body (2) sections and then the protrusions (5) of the morcellation bag (1) shall be extracted out of the abdomen (A). As the cut off ends of the protrusions (5) shall be sealed with a suture, it is prevented for fluids and/or small tissue parts to scatter or leak into the abdomen (A) from said ends that had been cut off.

The laparoscopic enclosed morcellation bag (1) subject to the invention makes it easier to extract the solid surgical specimen (S) located in the abdomen (A) during especially gynaecologic laparoscopic surgical operations out of said abdomen (A) and also makes the laparoscopic morcellation procedure carried out during the
The extraction process easier. Moreover the contact of the diseased section from which the specimen (S) is taken, with the abdomen (A) and the scattering of said disease into the abdomen (A) during the morcellation procedure is prevented. The elimination of this problem which is one of the basic problems of traditional applications and one of the issues that is emphasized frequently by international health organizations create reliability following surgical operations. The retracting of the solid specimen (S) out of the abdomen (A) during laparoscopic surgery, is usually carried out especially during myomectomy and subtotal hysterectomy operations.

The laparoscopic enclosed morcellation bag (1) subject to the invention has two basic differences that distinguish the invention in comparison to traditional applications. The first one of these differences is that the morcellation bag (1) is produced from an inflatable and expandable elastic material. As a result although the bag is produced to have a small size, the bag can have a much larger volume after it is inflated inside the abdomen (A) during a laparoscopic surgery. Secondly protrusions (5) shaped like a channel having closed ends that extend outwards from the body (2) of the morcellation bag are provided. These protrusions (5) are taken out of the abdomen (A) from the ports (P) after the morcellation bag (1) is inflated and the ends of the protrusions are cut off thereby acting as channels which allow the insertion of laparoscopic instruments (L) and morcellators (M) into the body (2) and in turn into the abdomen (A). The breaking up of the specimen (S) that is received inside the body (2) by means of the morcellation bag (1) subject to the invention is carried out inside the body of the bag, and following morcellation, the morcellation bag can be extracted out of the abdomen (A) without the risk of dissemination of a tissue part or leakage of fluid into the abdominal (A) region. Therefore it is also prevented for any kind of diseased tissue to be dispersed or scattered into the abdomen.
The specimen (S) is morcellated in a closed medium by means of the laparoscopic enclosed morcellation bag (1) subject to the invention and the specimen is extracted out of the abdomen (A) by means of the bag and this procedure can be carried out in a shorter period of time without extending the duration of the operation in comparison to traditional similar applications. As a result laparoscopic morcellation can be performed easily and faster. As the procedure can be carried out inside an enclosed bag, the risk of scattering of a diseased specimen (S) into the abdomen is also prevented. In conclusion as it is easier to extract the specimen (S) by means of a laparoscopic surgical method, it shall be possible to perform laparoscopic operations in situations where normally traditional operations would be carried out and the number of patients who can benefit from laparoscopic surgery shall increase.
CLAIMS

1. Laparoscopic enclosed morcellation bag (1) which makes it easier to extract the specimen (S) located inside the abdomen (A) (abdominal region) during laparoscopic surgical operations, and prevents the occurrence of complications due to the scattering of the specimen (S) into the abdomen (A) during the usage of morcellator (M) devices (M) when extracting solid materials out of the abdomen, characterized in that it comprises the following:

- At least a body (2) that is inflatable by gas produced from elastic material, forming an artificial volume wherein a morcellation process can be carried out therein, by means of being inflated by gas after said bag has been inserted into the abdomen (A) and wherein said body acts as an enclosed and impermeable chamber such that it prevents the specimen (S) received inside it to be scattered in the abdomen (A),

- At least an opening (3) located at the section of the body (2) of the bag facing the specimen (S), that is opened following the insertion thereof into the abdomen (A) through a port (P) incision enabling to receive the specimen (S) into the body (2),

- At least a mouth opening apparatus (4) position on the opening (3) section, which can be easily twisted and bent and which can return back to its former state if the pressure applied thereon is ceased, therefore being able to open on its own after it has been twisted and inserted into the abdomen (A) thereby also opening the mouth (3) section of the bag,

- At least a protrusion (5) extending out of the surface of the body (2), having a shape of a channel connected with the inner section of the body (2), having a closed end, where said closed end can be taken out of the abdomen (A) by means of a clamp over the skin incisions located on the abdomen (A), where said protrusion can act as a channel into which laparoscopic apparatus can be inserted into the body (2) after said closed ends are cut off.
2. A laparoscopic enclosed morcellation bag (1) according to claim 1, characterized by a mouth opening apparatus (4) that is inserted through the opening (3) and is clamped around said opening.

3. A laparoscopic enclosed morcellation bag (1) according to claim 1 or 2, characterized by a mouth opening apparatus (4) that has been produced such that it is integrated on the opening (3).

4. A laparoscopic enclosed morcellation bag (1) according to any of the claims 1 to 3, characterized in that it comprises several protrusions (5) that are extended out of the abdomen (A) by means of a clamp via different ports (P) in order to be able to use different laparoscopic instruments (L) where said ends of the protrusions are cut off in order to act as channels that are inserted into the body (2).

5. A laparoscopic enclosed morcellation bag (1) according to any of the preceding claims 1 to 4, characterized in that it comprises at least a clamp (6) that clamps the walls of the mouth section (3) and/or the protrusion (5) such that they are in contact with each other, and located on the protrusions (5) whose closed ends have been opened by cutting off said ends and/or the mouth (3), in order to prevent small tissue parts and fluid located inside the body (2) of the bag following the morcellation process to be scattered into the abdomen (A); wherein said clamp comprises a fixed section (6.1) positioned inside the walls and at least a mobile section (6.2) which clamps the walls at the fixed section (6.1) by being attached to the fixed section (6.1) at one end and by being rotated at said axis.

6. A laparoscopic enclosed morcellation bag (1) according to any of the preceding claims 1 to 4, characterized in that it comprises at least a constriction channel which enables to close the opening (3) of the bag.
located inside the abdomen, by an surgeon pulling a drawstring outside the abdomen (A) where said string has been passed through the area around the opening of the bag.

7. Usage method of the laparoscopic enclosed morcellation bag (1) according to any of the preceding claims which enables the Specimen (S) that has been cut off from the tissue at the early stages of the operation during laparoscopic surgeries to be taken out of the abdomen; characterized in that said method comprises the following steps:

- After cutting of the specimen (S) from the healthy tissue, both one of the laparoscopic instruments which was used during the cutting of the specimen, and the port (P) where the laparoscopic instrument (L) inserted into the abdomen were removed through the skin incision,

- Inserting first of all the twisted mouth opening apparatus (4) the mouth (3) and then the body (2) of the bag through the skin incision,

- Opening of the mouth opening apparatus (4) and in turn the mouth (3) of the bag once the pressure applied on the bag inside the abdomen (A) is released,

- Leaving at least one of the protrusions (5) located on the body (2) out of the abdomen (A) through the skin incision where the body (2) has been inserted therethrough,

- Receiving the Specimen (S) into the body (2) from the opening (3) by means of a laparoscopic instrument (L) that is inserted through a port (P) and monitoring said process at the same time by means of a camera (C) that has been inserted through another port (P),

- Extracting out the mouth opening apparatus (4) and in turn the opening (3) from the abdomen (A) by means of a laparoscopic instrument (L) and then detaching the port (P) and the camera (C) that has been inserted through said port at the same time,

- Extracting the port (P) and the camera (C) that has been inserted through said port out of the skin incision,
– Inserting the port (P) and the camera (C) into the opening (3) extending out of the abdomen (A),
– Forming an artificial volume by feeding gas into the body (2) through the opening (3),
– Cutting off of the end of the protrusion (5) that has been left out,
– Inserting a morcellator (M) into the body (2) through the cut end of the protrusion (5),
– Morcellating the specimen (S) located inside the body (2) with a morcellator (M), while observing said process with a camera (C),
– Sealing off the end of the protrusion (5) such that it is impermeable after taking the morcellator (M) passing through said protrusion (5) out of the protrusion channel,
– Extracting the body (2) having the specimen (S) pieces and fluids located therein, via the opening (3) that has been left outside the abdomen (A).

8. Usage method of the laparoscopic enclosed morcellation bag (1) according to claim 7, characterized in that the end of the protrusion (5) that has been cut off and opened is sealed off impermeably with a suture in order to prevent small tissue pieces and fluid located in the body (2) to be scattered inside the abdomen (A) following the morcellation process.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B17/42
ADD. A61B17/00

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)
A61B

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 practical, search terms used)
EPO-Internal, WPI Data

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>
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<td>X</td>
<td>US 2004/158261 AI (VU DINH Q [US]) 12 August 2004 (2004-08-12)</td>
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<td>X</td>
<td>WO 98/09569 AI (UNIV MASSACHUSETTS [US]; SMITH &amp; NEPHEW INC [US]; LACH ELLIOT [US]; CO) 12 March 1998 (1998-03-12)</td>
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<td>X,P</td>
<td>WO 2015/151117 A2 (VEOL MEDICAL TECHNOLOGIES PVT LTD [IN]) 8 October 2015 (2015-10-08)</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

* 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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  *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
  *Z* document member of the same patent family

Date of the actual completion of the international search
12 April 2016

Date of mailing of the international search report
20/04/2016

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Strazdauskas, Gedas
INTERNATIONAL SEARCH REPORT

Box No. II  Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos: 7, 8
   because they relate to subject matter not required to be searched by this Authority, namely:

2. [X] Claims Nos: 2, 6
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
   see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III  Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. [ ] As required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos:

4. [X] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos:

Remark on Protest
[X] The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
[X] The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
[ ] No protest accompanied the payment of additional search fees.
INTERNATIONAL SEARCH REPORT

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Conti nuati on of Box II .1

Claims Nos.: 7, 8


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Conti nuati on of Box II .2

Claims Nos.: 2-6

The subject-matter of the dependent claims 2-6 con tains multiple clarity and support problems (Art. 6 PCT) of such an extent that the skilled person cannot figure out which further limitations are implied by those claims. Consequently, claims 2-6 were not searched.

Please note that claim 1 per definition has the broadest scope and it was searched. Therefore, the applicant still can maintain the claims dependent on claim 1 provided that they are clarified later in the procedure. In other words, no subject-matter relating to the device (i.e. the laparoscopic encl osed morcellation bag) was exclud ed from the search.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international prel iminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the applicant proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guidelines C-IV, 7.2), should the problems which led to the Article 17(2) declaration be overcome.
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<td>US 2014236168 A1</td>
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