Medtronic BioPharma

Healthcare professionals educational material

InductOs® 1.5 mg/ml powder, solvent and matrix for implantation matrix
dibotermin alfa (rhBMP-2*)

Instructions for preparation and surgical application for lumbar interbody spine fusion surgery and for open acute tibia fractures

This educational guide is essential to ensure the safe and effective use of the product and the appropriate management of the important selected risks, therefore it is recommended that this guide is read carefully before preparing and administering the product

*recombinant human Bone Morphogenetic Protein-2

The European Medicines Agency has attached certain conditions to the Marketing Authorization for InductOs. This information is part of the mandatory risk minimisation measures implemented to ensure safe and effective use of InductOs.

This material does not contain all pertinent information. For the full information please carefully review the Summary of Product Characteristics before prescribing or using InductOs. The SmPC is available on the website of the European Medicines Agency **http://www.ema.europa.eu** and on the website **http://www.inductoseducationalmaterials.eu**

InductOs is indicated for single level lumbar interbody spine fusion as a substitute for autogenous bone graft in adults with degenerative disc disease who have had at least 6 months of non-operative treatment for this condition.

InductOs is indicated for the treatment of acute tibia fractures in adults, as an adjunct to standard care using open fracture reduction and intramedullary unreamed nail fixation.

InductOs®

1.5 mg/ml powder, solvent and matrix for implantation matrix

Instructions for preparation

InductOs must be prepared exactly in accordance with the directions for preparation. The appropriate dose is determined by the volume of wetted matrix required for the intended indication.

Failure to follow the method of administration of InductOs may compromise its safety and efficacy.

InductOs is prepared immediately prior to use. Dibotermin alfa must only be used following reconstitution with the solvent and matrix provided in the InductOs pack.

Once prepared, InductOs contains dibotermin alfa at a concentration of 1.5 mg/ml (12 mg per vial).

InductOs must not be used in concentrations higher than 1.5 mg/ml.

To prevent overloading the matrix, it is important to reconstitute the dibotermin alfa and to wet the entire sponge as described below.

Non-Sterile Field

1. Using sterile technique, place one syringe, one needle, and the matrix inner package in the sterile field.

2. Disinfect the stoppers of the dibotermin alfa and solvent vials.

3. Using the remaining syringe and needle from the pack, reconstitute the dibotermin alfa vial with 8.4ml of solvent.

Slowly inject the solvent into the vial containing lyophilised dibotermin alfa.

Swirl the vial gently to aid reconstitution.

Do not shake. Discard syringe and needle after use.

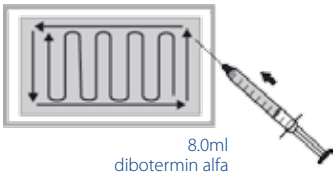
4. Disinfect the stopper of the reconstituted dibotermin alfa vial.

Sterile Field

5. Peel open the interior package of the matrix and leave the matrix in its tray.

6. Using aseptic transfer technique and the syringe and needle from step 1, withdraw 8.0 ml of the reconstituted dibotermin alfa solution from the vial in the non-sterile field, holding up the inverted vial to facilitate withdrawal.

7. Leaving the matrix in its tray UNIFORMLY distribute the dibotermin alfa solution on the matrix, following the pattern in the figure below.



8. Wait a MINIMUM of 15 minutes before using the prepared InductOs product. Use within 2 hours after preparation.

Instructions For Use In Lumbar interbody Fusion Surgery

InductOs® must not be used alone for this indication, but should be used with an approved (CE marked) lumbar interbody fusion device(s). Compatibility has been demonstrated with titanium, polyetheretherketone (PEEK) and allograft bone.

Care and caution must be used to prevent overfilling the lumbar interbody fusion device and/or the anterior portion of the intervertebral disc space.

Pre-Implantation

- The wetted matrix should be cut into 6 equal pieces (approximately 2.5 x 5 cm) as an aid for dose selection. The selected pieces can be further cut as required.
- The required volume of InductOs is determined by the intervertebral disc space and the size, shape, and internal volume of the lumbar interbody fusion device(s) being used. Care should be taken not to compress the product or overfill the volume intended for new bone formation.
- Typically, 4 mg (2.7 cm^3, 1/3 of the matrix) of InductOs is used in the intervertebral disc space and placed within the lumbar interbody fusion device(s) or in the anterior portion of the intervertebral disc space.

  The maximum dosage is limited to 8 mg (5.3 cm^3, 2/3 of the matrix) in the intervertebral disc space.
- The hollow geometry of the lumbar interbody fusion device must be carefully and loosely filled with the volume of InductOs corresponding to the internal volume of the device.

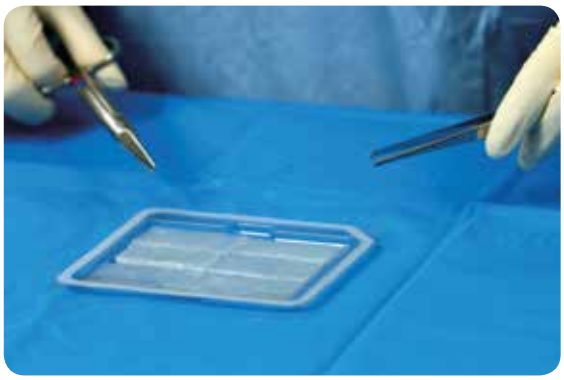
Implantation

- As per standard practice, disc material and the cartilaginous portions of the vertebral end-plates should be removed, preserving the cortical portions of the end-plates, and haemostasis should be achieved.
- For instructions to implant the lumbar interbody fusion device, please refer to the manufacturer's instructions for use.
- InductOs must not be implanted posterior to the lumbar interbody fusion device, where direct access to the spinal canal and/or nerve root(s) is possible. If leakage into the spinal canal and the nerve root is possible, a physical barrier between the matrix and any neurological tissue must be re-created by using, for example, local bone or allograft.

Post-Implantation

- Once InductOs and the lumbar interbody fusion device(s) are implanted, the inside of the intervertebral disc space must not be irrigated.

  Outside the intervertebral disc space, the surgical field should be irrigated as needed, and any fluid loss from the wetted matrix should be washed away.
- If a surgical drain is required, the drain should be placed remotely from the implantation site or, preferably, one layer superficial to the implantation site.



Dosing table for InductOs wetted matrix

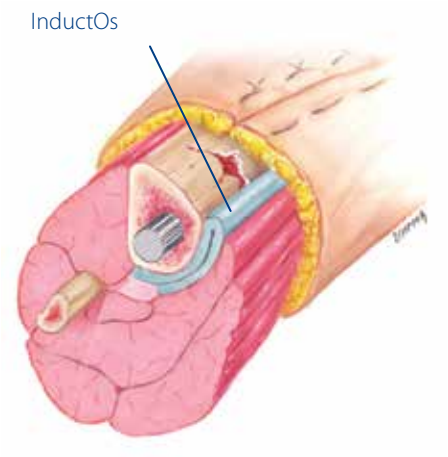
Portion of InductOs wetted matrix	Dimensions of wetted matrix	Volume of wetted matrix	Concentration of wetted matrix	Dibotermin alfa dose
1/6 of the matrix	2.5 cm x 5 cm	1.3 cm^3	1.5 mg/cm^3	2 mg
1/3 of the matrix	2.5 cm x 10 cm	2.7 cm^3	1.5 mg/cm^3	4 mg
2/3 of the matrix	5 cm x 10 cm	5.3 cm^3	1.5 mg/cm^3	8 mg
Entire matrix	7.5 cm x 10 cm	8 cm^3	1.5 mg/cm^3	12 mg

Instructions for Use in Acute tibia fracture surgery

Pre-Implantation

- Definitive fracture reduction, fixation, and haemostasis should be achieved prior to InductOs implantation.
- InductOs should be folded or cut as needed prior to implantation.

InductOs



Implantation

- InductOs is implanted after the completion of standard fracture and wound management (i.e. at the time of soft tissue closure).
- The volume of InductOs to be implanted is determined by the fracture anatomy and the ability to close the wound without overly packing or compressing the product. Generally, each fracture site is treated with the contents of one pack. The maximum dosage is limited to 24 mg (2 entire matrices).
- To the extent possible, the accessible surface area of the fracture (fracture lines and defects) should be covered with InductOs. InductOs should be placed bridging the fracture region and making good contact with the major proximal and distal fragments.
- Forceps must be used to handle InductOs. During handling and implantation, minimize fluid loss from the matrix. Do not squeeze.
- InductOs may be placed into a void (loosely packed), folded, rolled or wrapped, as the geometry of the fracture requires. InductOs does not provide mechanical stability and should not be used to fill a void in the presence of compressive forces.

Post-Implantation

- Once InductOs is implanted, do not irrigate the wound.
- If a surgical drain is required, the drain should be placed remotely from the implantation site or, preferably, one layer superficial to the implantation site.
- To achieve maximum potential efficacy, it is important to attain complete soft tissue coverage of InductOs following its implantation.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system:

Ireland
HPRA Pharmacovigilance
Earlsfort Terrace
IRL - Dublin 2
Tel: +353 1 6764971
Fax: +353 1 6762517
Website: **www.hpra.ie**
E-mail: **medsafety@hpra.ie**

Marketing Authorization Holder:

Medtronic BioPharma B.V.
Earl Bakkenstraat 10
6422 PJ Heerlen
The Netherlands
Local phone nr: 1800554629
E-mail: **biopharmamedicalinformation@medtronic.com**

Marketing Authorization Number:

EU/1/02/226/001

Legal classification:

Prescription Only Medicine

Medtronic BioPharma