

CLAIMS

1. A freeze-dried powder for preparing a thermogel comprising:
 - 5 - from 1% to 35% of 2-[(3-aminopropyl)amino]ethanethiol or one of its pharmaceutically acceptable salt;
 - from 40% to 85% of one or more poloxamer; and
 - from 0,1% to 20% of one or more carbohydrate compound.
- 10 2. A freeze-dried powder according to claim 1, characterised in that it contains from 5% to 30% of 2-[(3-aminopropyl)amino]ethanethiol.
3. A freeze-dried powder according to claim 1 or 2, characterised in that it contains from 45% to 80% of poloxamer.
- 15 4. A freeze-dried powder according to claim 3, characterised in that it contains from 60% to 75% of poloxamer.
5. A freeze-dried powder according to any of claims 1 to 4, characterised in that
- 20 poloxamer is chosen as being Poloxamer 407 or Poloxamer 188.
6. A freeze-dried powder according to any of claims 1 to 5, characterised in that it contains a mixture of Poloxamer 407 and Poloxamer 188.
- 25 7. A freeze-dried powder according to any of claims 1 to 6, characterised in that it contains from 0,5% to 15% of a carbohydrate compound.
8. A freeze-dried powder according to claim 7, characterised in that it contains from 1% to 10% of carbohydrate compound.
- 30 9. A freeze-dried powder according to any of claims 1 to 8, characterised in that carbohydrate compound is chosen among sugars.
10. Freeze-dried powder according to claim 9, characterised in that carbohydrate
- 35 compound is chosen among mannitol, lactose, sucrose, trehalose, sorbitol, glucose or raffinose.

11. Freeze-dried powder according to claim 10, characterised in that carbohydrate compound is chosen as being sorbitol or mannitol.
- 5 12. A freeze-dried powder according to any of claims 1 to 11, characterised in that it further contains one or more of the following ingredients:
- flavouring agent such as apple, banana, cherry, coconut, lemon, menthol, orange, raspberry, strawberry, coconut, tutti frutti or vanilla; and/or
 - high-intensity sweetener such as saccharin, aspartame, acesulfame potassium, sucralose or neotame.
- 10 13. A process for preparing a freeze-dried powder according to any of claims 1 to 12, said process comprising the following steps:
- hydrolysing amifostine into amifostine thiol under acidic conditions;
 - 15 - preparing a solution containing the excipients by:
 - o dissolving and mixing firstly all excipients presented in the formulation, except the poloxamer(s);
 - o cooling the temperature before adding gradually the poloxamer(s) to get a homogenous excipient solution;
 - 20 - mixing the obtained amifostine thiol solution with the obtained excipient solution;
 - freeze-drying the obtained solution; and
 - nitrogen inerting before sealing.
- 25 14. A process for preparing a thermogel comprising the reconstitution of the freeze-dried powder according to any of claims 1 to 12 with an aqueous solution.
15. A thermogel obtainable by a process according to claim 14.
- 30 16. A thermogel according to claim 15 for treating or protecting mucosal or cutaneous tissue from damage associated with anticancer therapy, in particular with radiation and/or chemotherapeutic treatment of cancers.