	<b>Washington State University</b> <b>Institutional Animal Care and Use Committee</b>	<b>Standard Operating Procedure #4</b>
	Title: Preparation of Sodium Pentobarbital Using Non-Pharm Grade Powder	
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## Standard Operating Procedures for Preparation of Sodium Pentobarbital Using Non-Pharm Grade Powder

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### **1.0 Purpose:**

1.1 To provide guidance on the preparation of sodium pentobarbital from pentobarbital powder. Note: Use of a non-pharmaceutical grade drug must be described and approved in your ASAF and use must be consistent with [IACUC Policy 29](#) "Use of Non-Pharmaceutical Grade Substances"

### **2.0 Ingredients:**

- 2.1 6 Gm sodium pentobarbital
- 2.2 10 ml ethanol (95%)
- 2.3 40 ml propylene glycol USP
- 2.4 qs to 100 ml with 0.9% saline


### **3.0 Preparations:**

- 3.1 Dissolve the pentobarbital powder in the ethanol.
- 3.2 Add 25 ml of saline (but only after the pentobarbital is completely dissolved), mix thoroughly.
- 3.3 Add 40 ml propylene glycol, mix.
- 3.4 Bring to final volume (100 ml) with 0.9% saline.

**The pentobarbital concentration in the final solution is 60 mg/ml.**

### **4.0 Notes:**

- 4.1 Stock solutions must be protected from light and maintained at 4°C no longer than 6 months.
- 4.2 Stock solutions must be passed through a sterile 0.2 micron filter prior to being stored.
- 4.3 Stock solutions must be prepared and stored in sterile tubes.
- 4.4 Working solutions can be prepared and maintained similar to stock solutions, but can be stored at room temperature for up to 30 days.
- 4.5 Transfer of solutions must utilize sterile supplies and techniques (e.g. sterile needles and syringes).
- 4.6 All containers must be labeled with material name, concentration, date prepared, storage requirements, expiration date, and the initials of the person making the solution.
- 4.7 Use must be recorded similar to other controlled substances.

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**5.0 Reference:**

5.1 IACUC [Policy #29](#) "Use of Non-Pharmaceutical Grade Substances"

<https://iacuc.wsu.edu/policies/>

5.2 <https://research.iu.edu/doc/compliance/animal-care/iupui/iupui-iacuc-use-of-non-pharmaceutical-grade-chemicals-compounds.pdf>