1.0 **Purpose:**

1.1 To provide guidance on the preparation of sodium pentobarbital from pentobarbital powder. Note: The use of non-pharmaceutical grade pentobarbital will require strong scientific justification for approval since it is available in pharmaceutical grade. There are also alternative pharmaceutical grade anesthetic options available.” Please view IACUC Policy 29 “Use of Non-Pharmaceutical Grade Substances” for additional guidance.

2.0 **Ingredients:**

2.1 6 g sodium pentobarbital
2.2 10 mL ethanol (95%)
2.3 40 mL propylene glycol USP
2.4 Fill to 100 mL with 0.9% saline (approx. 50 mL saline)

3.0 **Preparations:**

3.1 Dissolve the pentobarbital powder in the ethanol.
3.2 Add 25 mL of saline after the pentobarbital is completely dissolved in the ethanol, mix thoroughly.
3.3 Add 40 mL propylene glycol, mix.
3.4 Bring to final volume (100 mL) with approximately 25 mL of 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 vials.
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.
5.0 Reference:

5.1 IACUC Policy #29 “Use of Non-Pharmaceutical Grade Substances”
https://iacuc.wsu.edu/policies/