

## **Preparation and Storage of Analgesic Agents**

### **1.0 Equipment**

- 1.1** Safety glasses
- 1.2** Brady Label Printer
- 1.3** P1000 Gilson pipette

### **2.0 Supplies**

- 2.1** 20ml Universals
- 2.2** Sterile Water for Injection
- 2.3** 1ml plastic disposable syringes
- 2.4** 1000ul pipette tips
- 2.5** 10ml disposable syringe
- 2.6** 1.5ml Eppendorfs
- 2.7** Brady Labels
- 2.8** Brady Ink Ribbons
- 2.9** Torbugesic (Butorphanol 10mg/ml)

### 3.0 Procedure

#### 3.1 General Information

- 3.1.1 Vetergesic and Torbugesic are controlled substances and need to be stored in a locked drugs fridge.
- 3.1.2 Safety glasses must be worn at all times by personnel preparing the media, and by those working in the immediate area.
- 3.1.3 Once opened, sterilised water can be stored for 1 week only.

#### 3.2 Preparing the Vetergesic

- 3.2.1 The Vetergesic is prepared by diluting 1ml Vetergesic with 11ml sterile water.
- 3.2.2 Invert the universal several times to ensure the solution is evenly mixed.
- 3.2.3 Aliquot 1ml into 1.5ml Eppendorf's and label with 'VET' and the date prepared in the format DD/MM/YYYY.
- 3.2.4 Parafilm the Eppendorfs and store in lockable fridge (4°C) in the lab for up to 4 weeks from the preparation date.

#### 3.3 Preparing the Torbugesic

- 3.3.1 For every 0.5ml of Torbugesic stock solution (10mg/ml), dilute in a total of 19.5ml sterilised water for injections.
- 3.3.2 Invert the universal several times to ensure the solution is evenly mixed.
- 3.3.3 Aliquot 1ml into 1.5ml Eppendorf's and label with 'TORB' and the date prepared in the format DD/MM/YYYY.
- 3.3.4 Parafilm the Eppendorfs and store in lockable fridge (4°C) for up to 4 weeks.

#### 4.0 Appendix 1

##### VETERGESIC™ FOR MICE

Buprenorphine 0.3 mg/ml (type of analgesic: Opioid)

**Recommended dose rate for mice: 0.05 – 0.1mg/kg**

<b>Bodyweight</b>	<b>Dose:</b>
<b>15 gram:</b>	<b>0.03 – 0.06ml</b>
<b>20 gram:</b>	<b>0.04 – 0.08ml</b>
<b>25 gram:</b>	<b>0.05 – 0.1ml</b>
<b>30 gram:</b>	<b>0.06 – 0.12ml</b>
<b>35 gram:</b>	<b>0.07 – 0.14ml</b>
<b>40 gram:</b>	<b>0.08 – 0.16ml</b>
<b>45 gram:</b>	<b>0.09 – 0.18ml</b>
<b>50 gram:</b>	<b>0.1 - 0.20 ml</b>
<b>55 gram:</b>	<b>0.11 – 0.22ml</b>
<b>60 gram:</b>	<b>0.12 – 0.24ml</b>

**The higher dose is the maximum dose for any 12 hours period.**

Route: sub-cutaneous

Time to effect: 15 min

## 5.0 Appendix 2

Mice should receive a dose of 1mg/kg of Torbugesic which mean a 25g mouse would receive 0.025mg.

The stock solution of Torbugesic is 10mg/ml and this must be diluted 1:40 to deliver the correct dose in a 0.1ml injection volume.

**Calculation:** *To deliver a 0.025mg dose in 0.1ml*

0.1ml injection volume of the stock solution (10mg/ml) contains 1.0mg of Torbugesic.

To achieve a dosing rate of 0.025mg/25g mouse (in a 0.1ml injection) the stock solution needs to be diluted 40 times ( $1000\text{g}/25\text{g} = 40$ )