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 Torbugsic (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

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

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 (1000g/25g = 40)