

**Supplemental Table 1: Environmental impact assessment for 100mg morphine (in bulk form), 100mg morphine at final production (including sterilisation and packaging), and for comparison, burning 1 litre of petrol.**

<b>Environmental Impact category</b>	<b>Units</b>	<b>100 mg morphine, Bulk Form</b>	<b>100 mg morphine, in 100 ml bag</b>	<b>1 litre petrol</b>
Climate change	g CO <sub>2</sub>	24	180	2,740
Water use	Litres	7.1	0.14	0.3
Ozone depletion	kg CFC-11 eq (x 10 <sup>-13</sup> )	7,800	12,000	5.4
Photochemical oxidant formation	kg NMVOC <sup>1</sup> (x 10 <sup>-5</sup> )	9.3	100	2,300
Human toxicity	kg 1,4-DB <sup>2</sup> eq	0.3	0.2	238
Terrestrial toxicity	kg 1,4-DB <sup>2</sup> eq (x 10 <sup>-5</sup> )	2	2	3
Marine toxicity	kg 1,4-DB <sup>2</sup> eq	0.1	0.08	55.5

<sup>1</sup>NMVOC= Non-Methane Volatile Organic Compounds

<sup>2</sup>DB= Dichlorobenzene

Water use was 7.8 litres (95%CI: 6.7- 9.0 litres), representing approximately 0.07% of an average Australian's daily water use (including the 'embedded' water required to produce food and used in industry etc.),<sup>33</sup> with 6.7 litres (86%) used for opium poppy farming. Ozone depletion arose predominately from farming (herbicide, pesticide and fertiliser production), with smaller contributions from bulk morphine manufacture for the solvents and plastic manufacture. Although the ozone depletion from 100mg morphine production is 1,000-fold greater than burning 1 litre of petrol, it is approximately 0.04% of the ozone depleting effects arising from an average Australian's daily activity.