IODINE

Date: November 8, 2007

Proper name(s): Iodine (Sweetman 2007; O’Neil et al. 2001)

Common name(s): Iodine (Sweetman 2007; O’Neil et al. 2001)

Source material(s):
- Bladderwrack (dried thallus of Fucus vesiculosus L., Fucus serratus L. (Fucaceae) or Ascophyllum nodosum L. Le Jolis (Fucaceae)) (Guiry and Guiry 2007; Sweetman 2007)
- Kelp (Sweetman 2007) (species from the order Laminariales) (Guiry and Guiry 2007; Abbott and Hollenberg 1976)
- Potassium iodate (Sweetman 2007; IOM 2003)
- Potassium iodide (Sweetman 2007; O’Neil et al. 2001)
- Sodium iodide (Sweetman 2007; O’Neil et al. 2001)

Route(s) of administration: Oral

Dosage form(s): Those pharmaceutical dosage forms suited to oral administration, including but not limited to chewable tablets, caplets, capsules, strips, lozenges, powders or liquids where the dose is measured in drops, teaspoons, or tablespoons are acceptable. This monograph is not intended to include food-like dosage forms such as bars, chewing gums or beverages.

Use(s) or Purpose(s): Statement(s) to the effect of:

General: A factor in the maintenance of good health (IOM 2006; IOM 2001).
Specific: Helps in the function of the thyroid gland (IOM 2006; Shils et al. 2006; IOM 2001; Groff and Gropper 2000).

Dose-specific: For products providing daily doses of iodine at or above the Recommended Dietary Allowance (RDA) (adjusted for the life stage groups), the following use or purpose is acceptable: Helps to prevent iodine deficiency (IOM 2006; Shils et al. 2006; IOM 2001; Groff and Gropper 2000). [Note: Iodine deficiency is rare in North America (IOM 2006).]

See Appendix 1 for definitions and Table 2 in Appendix 2 for RDA values.

Dose(s):

Table 1: Dose information for iodine presented as dose per day

<table>
<thead>
<tr>
<th>Life stage group</th>
<th>1-3 y</th>
<th>4-8 y</th>
<th>9-13 y</th>
<th>14-18 y</th>
<th>≥ 19 y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum¹</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Maximum²</td>
<td>133</td>
<td>200</td>
<td>400</td>
<td>800</td>
<td>800</td>
</tr>
</tbody>
</table>

¹Based on approximately 5% of the highest RDA (IOM 2006). See Appendix 1 for definitions and Table 2 in Appendix 2 for RDA values.
²Maximum dose based on the Tolerable Upper Intake Level (UL) less average dietary intake (adapted from IOM 2006).
³Includes pregnant and breastfeeding women.

Duration of use: No statement required.

Risk information: Statement(s) to the effect of:

Caution(s) and warning(s): No statement required.

Contraindication(s): No statement required.

Known adverse reaction(s): No statement required.

Non-medicinal ingredients: Must be chosen from the current NHPD List of Acceptable Non-medicinal Ingredients and must meet the limitations outlined in the list.
Specifications: Must comply with the minimum specifications outlined in the current NHPD *Compendium of Monographs*.

References:


Appendix 1: Definitions

Recommended Dietary Allowances (RDA): The average daily dietary nutrient intake level sufficient to meet the nutrient requirements of nearly all (97-98%) healthy individuals in a particular life stage and gender group (IOM 2006).

Tolerable Upper Intake Level (UL): The highest average daily nutrient intake level that is likely to pose no risk of adverse health effects to almost all individuals in the general population. As intake increases above the UL, the potential risk of adverse effects may increase (IOM 2006).

Appendix 2: RDA Values

The RDA values for iodine are provided below. For the purpose of this monograph, these values are intended to:
- provide targets for setting appropriate supplement dosage levels;
- provide the minimum dose for the use of the dose specific use or purpose: “Helps to prevent iodine deficiency”;
- facilitate the optional labelling of % RDA values.

Table 2: Recommended Dietary Allowance values for iodine based on life stage group (IOM 2006)

<table>
<thead>
<tr>
<th>Life stage group</th>
<th>Iodine (µg/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 1-8 y</td>
<td>90</td>
</tr>
<tr>
<td>Adolescents 9-13 y</td>
<td>120</td>
</tr>
<tr>
<td>Adults 14-18 y</td>
<td>150</td>
</tr>
<tr>
<td>Adults ≥ 19 y</td>
<td>150</td>
</tr>
<tr>
<td>Pregnancy 14-50 y</td>
<td>220</td>
</tr>
<tr>
<td>Breastfeeding 14-50 y</td>
<td>290</td>
</tr>
</tbody>
</table>