**IOM-1**

**Na\(^{131}\)I SOLUTION**

(Therapeutic - For Oral Administration)

Sodium iodide (Na\(^{131}\)I) in solution form is used extensively for therapy of thyroid cancer. A sufficiently high concentration delivers prescribed radiation dose to the thyroid gland tissue. It is efficacious, safe, simple and cost effective.

**INDICATIONS**

- Treatment of thyroid metastases, thyrotoxicosis, toxic multi-nodular goitre, autonomous nodules
- Treatment of metastatic thyroid carcinoma post thyroidectomy and ablation therapy of thyroid remnants/residual local tissue/metastatic disease

**Description**

\(^{131}\)I as Sodium iodide in dilute sodium thiosulphate solution

**Appearance**

Clear, colourless, aqueous preparation

**Radioactive concentration**

Typically 50 mCi/ml (1.85 GBq/ml) on the reference date

**Radionuclidic purity**

No other extraneous radionuclide is present.

**pH**

7–10

**Radiochemical purity**

Not less than 95% as iodide

**Thiosulphate content**

25–100 mg/Ci of I-131 on the date of preparation

**Tellurium content**

< 5 µg/ml

**Specific activity**

No carrier added, 25–40 mCi/µg on the reference date

**Storage**

Store at room temperature with adequate shielding

**Shelf life**

30 days from the date of determining the radiochemical purity

**Availability**

Ex-stock (Weekly)

**Dosage and administration**

Intended dose administered orally, is a matter for clinical judgment

**Available pack sizes**

50 mCi in 1 ml (1.85 GBq in 1ml); 100 mCi in 2 ml (3.7 GBq in 2ml); 150 mCi in 3 ml (5.55 GBq in 3ml); 200 mCi in 4 ml (7.4 GBq in 4ml); 250 mCi in 5 ml (9.25 GBq in 5ml)
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOM-1</td>
<td><strong>Iodine -131</strong> as Sodium iodide in dilute sodium thiosulphate solution</td>
<td>50 mCi, 100 mCi, 150 mCi, 200 mCi, 250 mCi as on the reference date</td>
</tr>
</tbody>
</table>

**Physical characteristics of Iodine -131**

- **Half life**: 8.02 days
- **Decay mode**: $\beta^-$
- $E_p$ (%) = 250 keV (9%), 335 keV (9%) 608 keV (81%), 812 keV (0.7%)
- $E_p$(Mean) = 191.6 keV (89.3%)
- $E_\gamma$ (%) = 284 keV (6.06%), 364 keV (81%), 637 keV (7.3%), 723 keV (1.8%)

**Decay Chart of Iodine -131**

<table>
<thead>
<tr>
<th>Days</th>
<th>Multiplication Factor</th>
<th>50 mCi on Ref. date</th>
<th>100 mCi on Ref. date</th>
<th>150 mCi on Ref. date</th>
<th>200 mCi on Ref. date</th>
<th>250 mCi on Ref. date</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>1.298</td>
<td>65</td>
<td>130</td>
<td>195</td>
<td>260</td>
<td>325</td>
</tr>
<tr>
<td>-2</td>
<td>1.190</td>
<td>60</td>
<td>119</td>
<td>179</td>
<td>238</td>
<td>298</td>
</tr>
<tr>
<td>-1</td>
<td>1.086</td>
<td>54</td>
<td>109</td>
<td>163</td>
<td>217</td>
<td>272</td>
</tr>
<tr>
<td>Ref. date</td>
<td><strong>1.00</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
<td><strong>150</strong></td>
<td><strong>200</strong></td>
<td><strong>250</strong></td>
</tr>
<tr>
<td>1</td>
<td>0.92</td>
<td>46</td>
<td>92</td>
<td>138</td>
<td>184</td>
<td>230</td>
</tr>
<tr>
<td>2</td>
<td>0.84</td>
<td>42</td>
<td>84</td>
<td>126</td>
<td>168</td>
<td>210</td>
</tr>
<tr>
<td>3</td>
<td>0.77</td>
<td>39</td>
<td>77</td>
<td>116</td>
<td>154</td>
<td>193</td>
</tr>
<tr>
<td>4</td>
<td>0.71</td>
<td>36</td>
<td>71</td>
<td>107</td>
<td>142</td>
<td>178</td>
</tr>
<tr>
<td>5</td>
<td>0.65</td>
<td>33</td>
<td>65</td>
<td>98</td>
<td>130</td>
<td>163</td>
</tr>
<tr>
<td>6</td>
<td>0.60</td>
<td>30</td>
<td>60</td>
<td>90</td>
<td>120</td>
<td>150</td>
</tr>
<tr>
<td>7</td>
<td>0.55</td>
<td>28</td>
<td>55</td>
<td>83</td>
<td>110</td>
<td>138</td>
</tr>
<tr>
<td>8</td>
<td>0.50</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>125</td>
</tr>
<tr>
<td>9</td>
<td>0.46</td>
<td>23</td>
<td>46</td>
<td>69</td>
<td>92</td>
<td>115</td>
</tr>
<tr>
<td>10</td>
<td>0.42</td>
<td>21</td>
<td>42</td>
<td>63</td>
<td>84</td>
<td>105</td>
</tr>
<tr>
<td>11</td>
<td>0.39</td>
<td>20</td>
<td>39</td>
<td>59</td>
<td>78</td>
<td>98</td>
</tr>
<tr>
<td>12</td>
<td>0.36</td>
<td>18</td>
<td>36</td>
<td>54</td>
<td>72</td>
<td>90</td>
</tr>
</tbody>
</table>

For placing the orders and further details please contact  
Customer Support Services Cell (CSSC)  
**Board of Radiation and Isotope Technology**  
V.N.Purav Marg, Mumbai-400 094  
Tel: (022) 2556 9806, 2551 2993, 2557 3534, 2556 5535  
Fax: (022) 2556 2161, 2558 1319  
E-mail: sales@britatom.com  
Website: www.britatom.com