



# **lodine-123 Sodium**Radiochemical Solution

lodine-123 can be used for a wide range of clinical imaging applications in endocrinology, neurology, oncology and cardiology. It is also an ideal research tool because of its short half-life, clear SPECT images, and ease of handling.

BWXT Medical offers Sodium lodide in solution and dry forms, with multiple shipment days available per week and next day delivery across North America.

### **Process Data**

#### **Nuclear Reaction**

Primary

 $^{124}$ Xe (p,2n)  $^{123}$ Cs  $\rightarrow$   $^{123}$ Xe  $\rightarrow$   $^{123}$ I Secondary

<sup>124</sup>Xe (p,pn) <sup>123</sup>Xe → <sup>123</sup>I

#### **Assay**

High resolution gamma-ray spectrometry at 159 keV

## **Product Specification**

#### Half-Life:

13.2 hours

### **Solution Form**

Sodium iodide in 0.1N NaOH

#### Dry Form

Sodium iodide in 0.1N NaOH evaporated to dryness under nitrogen.

#### Specific Activity\*

No carrier added

#### **Activity Concentration\***

At customer request

#### **Radiochemical Purity**

≥ 95% iodide

#### Radiopurity\*

≥ 99.8% <sup>123</sup>I

≤ 0.2% total other nuclides

\*At noon, Pacific Time, one day after shipment.

Please note that the radiochemicals listed are not tested for sterility or pyrogenicity. Verification of their suitability for use in humans is the sole responsibility of the purchaser.

#### **Packaging**

- V-vial with
   (1, 3, 5 mL)
- Glass vial
   (6, 10 mL)

## **Product Origin**

Vancouver, Canada

# Advantages



- Key supplier to North American market since 1984
- High quality product, preservative free
- Custom dispensing available for next day delivery
- Available in solution and dry forms



#### **World-Class Delivery Service**

BWXT Medical has a world-class distribution system and specialized order management system.

Our extensive experience and carefully managed transportation logistics mean products reach your

# Other BWXT Products:

destination on time.

- Indium (In-111) Oxyquinoline Solution (US Only)
- Indium-111 Chloride Radiochemical Solution
- Iodine-123 Sodium Iodide Oral Solution (Canada Only)
- Germanium-68 Chloride Radiochemical Solution
- Strontium-82 Chloride Radiochemical Solution

# Iodine-123 Decay Table Half-Life: 13.2 hours

HOURS	0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
0	1.0000	0.9870	0.9741	0.9614	0.9488	0.9365	0.9243	0.9122	0.9003	0.8886	0.8770	0.8655
3	0.8542	0.8431	0.8321	0.8213	0.8105	0.8000	0.7895	0.7792	0.7691	0.7591	0.7492	0.7394
6	0.7297	0.7202	0.7108	0.7016	0.6924	0.6834	0.6745	0.6657	0.6570	0.6484	0.6400	0.6316
9	0.6234	0.6152	0.6072	0.5993	0.5915	0.5838	0.5762	0.5686	0.5612	0.5539	0.5467	0.5396
	0.5325	0.5256	0.5187	0.5120	0.5053	0.4987	0.4922	0.4858	0.4794	0.4732	0.4670	0.4609
15	0.4549	0.4490	0.4431	0.4373	0.4316	0.4260	0.4204	0.4150	0.4096	0.4042	0.3989	0.3937
18	0.3886	0.3835	0.3785	0.3736	0.3687	0.3639	0.3592	0.3545	0.3499	0.3453	0.3408	0.3363
21	0.3320	0.3276	0.3234	0.3191	0.3150	0.3109	0.3068	0.3028	0.2989	0.2950	0.2911	0.2873
24	0.2836	0.2799	0.2762	0.2726	0.2691	0.2656	0.2621	0.2587	0.2553	0.2520	0.2487	0.2454
27	0.2422	0.2391	0.2360	0.2329	0.2299	0.2269	0.2239	0.2210	0.2181	0.2152	0.2124	0.2097
30	0.2069	0.2042	0.2016	0.1989	0.1964	0.1938	0.1913	0.1888	0.1863	0.1839	0.1815	0.1791
33	0.1768	0.1745	0.1722	0.1699	0.1677	0.1655	0.1634	0.1613	0.1592	0.1571	0.1550	0.1530
36	0.1510	0.1490	0.1471	0.1452	0.1433	0.1414	0.1396	0.1378	0.1360	0.1342	0.1324	0.1307
39	0.1290	0.1273	0.1257	0.1240	0.1224	0.1208	0.1192	0.1177	0.1161	0.1146	0.1131	0.1117
42	0.1102	0.1088	0.1073	0.1059	0.1046	0.1032	0.1019	0.1005	0.0992	0.0979	0.0966	0.0954
45	0.0941	0.0929	0.0917	0.0905	0.0893	0.0882	0.0870	0.0859	0.0848	0.0836	0.0826	0.0815
48	0.0804	0.0794	0.0783	0.0773	0.0736	0.0753	0.0743	0.0734	0.0724	0.0715	0.0705	0.0696
51	0.0687	0.0678	0.0669	0.0660	0.0652	0.0643	0.0635	0.0627	0.0618	0.0610	0.0602	0.0595
54	0.0587	0.0579	0.0572	0.0564	0.0557	0.0550	0.0542	0.0535	0.0528	0.0521	0.0515	0.0508
57	0.0501	0.0495	0.0488	0.0482	0.0479	0.0469	0.0463	0.0457	0.0451	0.0445	0.0440	0.0434

The half-life values stated are as of time of publication. BWXT values may vary.

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