

In-111 Fact Sheet

Indium-111 Radiochemical Indium Chloride Solution

Indium (In-111) Chloride

Half-Life: 2.80 days

Indium-111 Radiochemical Indium Chloride Solution

Indium-111 is used in specialized diagnostic applications, for example, with indium-111 labelled antibodies. Indium-111 oxine is also useful for labelling blood cell components. Other applications include the labelling of platelets for thrombus detection, labelled leukocytes for localization of inflammation and abscesses, as well as leukocyte kinetics.

MDS Nordion has an unparalleled base of technical expertise and production capabilities. State-of-the-art facilities provide a reliable supply of isotopes to customers around the world. Our strong focus on customer service and quality has made us a world leader.

Process Data

Nuclear Reaction

$^{112}\text{Cd} (p,2n) ^{111}\text{In}$

Assay

High resolution gamma spectrometry at 245.4 keV

Product Specification

Chemical Form

Indium chloride in dilute HCl

Normality

0.05 N \pm 0.01 N HCl

Specific Activity

No carrier added

Activity Concentration*

≥ 25 mCi/mL

Radiopurity*

$^{111}\text{In} \geq 99.9\%$

Others $\leq 0.1\%$

Chemical Purity*

Fe, Cd, Cu, Pb, Zn, Ni each

≤ 100 nanograms/mCi

*At 12:00, Pacific Time, one day after shipment.

Packaging

- Reacti-vial – screw cap glass V-vial with septum (1 mL)
- Kontes vial – crimp cap glass V-vial (1 mL, 3 mL, 5 mL)
- Hypovial – crimp cap glass vial (6 mL, 10 mL, 30 mL)
(Other vial options are available).

Availability

Dispensed daily

Product Origin

Vancouver, Canada

World Class Delivery Service

MDS Nordion has a world class distribution system that includes a unique, software-based order management system. Carefully managed transportation logistics ensure products reach their destination on time.

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.

Indium-111 Decay Table Half-Life: 2.80 days

HOURS:	0	1	2	3	4	5	6	7	8	9
0	1.0000	0.9897	0.9796	0.9695	0.9596	0.9497	0.9400	0.9303	0.9208	0.9113
10	0.9020	0.8927	0.8836	0.8745	0.8655	0.8567	0.8479	0.8392	0.8306	0.8220
20	0.8136	0.8052	0.7970	0.7888	0.7807	0.7727	0.7648	0.7569	0.7492	0.7415
30	0.7339	0.7263	0.7189	0.7115	0.7042	0.6970	0.6898	0.6827	0.6757	0.6688
40	0.6619	0.6551	0.6484	0.6418	0.6352	0.6287	0.6222	0.6158	0.6095	0.6033
50	0.5971	0.5909	0.5849	0.5789	0.5729	0.5670	0.5612	0.5555	0.5498	0.5441
60	0.5385	0.5330	0.5276	0.5221	0.5168	0.5115	0.5062	0.5010	0.4959	0.4908
70	0.4858	0.4808	0.4758	0.4710	0.4661	0.4613	0.4566	0.4519	0.4473	0.4427
80	0.4382	0.4337	0.4292	0.4248	0.4204	0.4161	0.4119	0.4076	0.4035	0.3993
90	0.3952	0.3912	0.3871	0.3832	0.3792	0.3754	0.3715	0.3677	0.3639	0.3602
100	0.3565	0.3528	0.3492	0.3456	0.3421	0.3386	0.3351	0.3317	0.3282	0.3249
110	0.3215	0.3182	0.3150	0.3117	0.3085	0.3054	0.3022	0.2991	0.2961	0.2930
120	0.2900	0.2871	0.2841	0.2812	0.2783	0.2755	0.2726	0.2698	0.2671	0.2643
130	0.2616	0.2589	0.2563	0.2536	0.2510	0.2485	0.2459	0.2434	0.2409	0.2384
140	0.2360	0.2335	0.2312	0.2288	0.2264	0.2241	0.2218	0.2195	0.2173	0.2150
150	0.2128	0.2107	0.2085	0.2064	0.2042	0.2021	0.2001	0.1980	0.1960	0.1940
160	0.1920	0.1900	0.1881	0.1861	0.1842	0.1823	0.1805	0.1786	0.1768	0.1750
170	0.1732	0.1714	0.1696	0.1679	0.1662	0.1645	0.1628	0.1611	0.1595	0.1578
180	0.1562	0.1546	0.1530	0.1514	0.1499	0.1483	0.1468	0.1453	0.1438	0.1423
190	0.1409	0.1394	0.1380	0.1366	0.1352	0.1338	0.1324	0.1311	0.1297	0.1284

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

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