

Tl-201 Fact Sheet

Thallium-201 Radiochemical Thallium Chloride Solution

Thallium (Tl-201) Chloride

Half-Life: 3.04 days

Thallium-201 Radiochemical Thallium Chloride Solution

For over 20 years, thallium-201 has been mainly used in the manufacturing of thallium-201 injections which are widely used in nuclear medicine for cardiac perfusion studies.

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



Assay

High resolution gamma spectrometry at 167.4 keV

Product Specification

Chemical Form

Thallium chloride in 0.9% sodium chloride solution

pH

4.5 to 7

Specific Activity*

≥ 1000 Ci/g

Activity Concentration*

≥ 40 mCi/mL

Radiopurity*

$^{201}\text{Tl} \geq 98.2\%$

$^{200}\text{Tl} \leq 1.4\%$

$^{202}\text{Tl} \leq 0.3\%$

Others ≤ 0.1%

Chemical Purity*

Tl, Fe, Cu each ≤ 0.2 µg/mCi ^{201}Tl

*At noon, Pacific Time, two days after shipment.

Packaging

Hypovial – crimp cap glass vial with septum (6 mL, 10 mL, 20 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.



Thallium-201 Decay Table Half-Life: 3.04 days

HOURS:	0	1	2	3	4	5	6	7	8	9
0	1.0000	0.9905	0.9812	0.9719	0.9627	0.9536	0.9446	0.9357	0.9268	0.9180
10	0.9094	0.9008	0.8923	0.8838	0.8755	0.8672	0.8590	0.8509	0.8428	0.8348
20	0.8270	0.8191	0.8114	0.8037	0.7961	0.7886	0.7811	0.7737	0.7664	0.7592
30	0.7520	0.7449	0.7379	0.7309	0.7240	0.7171	0.7103	0.7036	0.6970	0.6904
40	0.6839	0.6774	0.6710	0.6646	0.6584	0.6521	0.6460	0.6399	0.6338	0.6278
50	0.6219	0.6160	0.6102	0.6044	0.5987	0.5930	0.5874	0.5819	0.5764	0.5709
60	0.5655	0.5602	0.5549	0.5496	0.5444	0.5393	0.5342	0.5291	0.5241	0.5192
70	0.5143	0.5094	0.5046	0.4998	0.4951	0.4904	0.4858	0.4812	0.4766	0.4721
80	0.4677	0.4632	0.4588	0.4545	0.4502	0.4460	0.4417	0.4376	0.4334	0.4293
90	0.4253	0.4212	0.4173	0.4133	0.4094	0.4055	0.4017	0.3979	0.3941	0.3904
100	0.3867	0.3831	0.3794	0.3759	0.3723	0.3688	0.3653	0.3618	0.3584	0.3550
110	0.3517	0.3484	0.3451	0.3418	0.3386	0.3354	0.3322	0.3290	0.3259	0.3229
120	0.3198	0.3168	0.3138	0.3108	0.3079	0.3050	0.3021	0.2992	0.2964	0.2936
130	0.2908	0.2881	0.2853	0.2826	0.2800	0.2773	0.2747	0.2721	0.2695	0.2670
140	0.2645	0.2620	0.2595	0.2570	0.2546	0.2522	0.2498	0.2474	0.2451	0.2428
150	0.2405	0.2382	0.2360	0.2337	0.2315	0.2293	0.2272	0.2250	0.2229	0.2208
160	0.2187	0.2166	0.2146	0.2126	0.2105	0.2086	0.2066	0.2046	0.2027	0.2008
170	0.1989	0.1970	0.1951	0.1933	0.1915	0.1897	0.1879	0.1861	0.1843	0.1826
180	0.1809	0.1791	0.1774	0.1758	0.1741	0.1725	0.1708	0.1692	0.1676	0.1660
190	0.1645	0.1629	0.1614	0.1598	0.1583	0.1568	0.1553	0.1539	0.1524	0.1510

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

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