

# 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 25 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 have made us a world leader.

### Process Data

#### Nuclear Reaction

$^{203}\text{Tl} (p,3n) ^{201}\text{Pb} (9.4 \text{ hours}) \rightarrow ^{201}\text{Tl}$

### Product Specification

#### Chemical Form

Thallium chloride in 0.9% NaCl, pH 4-7

#### Specific Activity\*

$\leq 125 \mu\text{g}/\text{Ci}$

#### Radionuclidic Purity\*

$^{200}\text{Tl} \leq 2.5\%$

$^{202}\text{Tl} \leq 0.2\%$

$^{203}\text{Pb} \leq 0.1\%$

#### Radiochemical Purity

$\geq 95\%$

#### Chemical Purity

Fe, Cu each  $\leq 25 \text{ ppm}$

### Packaging

Crimp cap glass vial with teflon coated septum (10 mL)

### Availability

Please inquire

### Product Origin

Fleurus, Belgium

### First 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.

\*Activity at 12 a.m. CET, one day after production.

## 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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