

Palladium-103 Radiochemical Palladium Chloride Solution

**Palladium (Pd-103)
Chloride**
Half-Life: 16.99 days

PALLADIUM-103 RADIOCHEMICAL PALLADIUM CHLORIDE SOLUTION

Palladium-103 is used to manufacture brachytherapy permanent implant seeds. These seeds are primarily used for the treatment of early stage prostate cancer.

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

Assay

High resolution gamma spectrometry at 357 keV

PRODUCT SPECIFICATION

Chemical Form

Palladium Chloride in dilute Ammonium Hydroxide solution

pH

7-11

Specific Activity*

≥ 60 Ci/g

Activity Concentration*

≥ 500 mCi/mL

Radiopurity*

$^{103}\text{Pd} \geq 99.95\%$

All others ≤ 0.05%

*Activity and radiopurity specifications are at customer's calibration 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.

PACKAGING

- Kontes vial – crimp cap glass V-vial (3 mL, 5 mL)
- Hypovial – crimp cap glass vial with septum (6 mL, 10 mL, 20 mL, 30 mL)
- Reacti-vial (3 mL)
(Other vial options are available).

AVAILABILITY

Dispensed daily

PRODUCT ORIGIN

Vancouver, Canada

WORLD CLASS DELIVERY SERVICE

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.



Palladium-103 Decay Table Half-Life: 16.99 days

HOURS	0	2	4	6	8	10	12	14	16	18	20	22
0	1.0000	0.9966	0.9932	0.9899	0.9865	0.9831	0.9798	0.9765	0.9732	0.9699	0.9666	0.9633
1	0.9600	0.9568	0.9535	0.9503	0.9471	0.9438	0.9406	0.9374	0.9343	0.9311	0.9279	0.9248
2	0.9216	0.9185	0.9154	0.9123	0.9092	0.9061	0.9030	0.9000	0.8969	0.8939	0.8908	0.8878
3	0.8848	0.8818	0.8788	0.8758	0.8729	0.8699	0.8669	0.8640	0.8611	0.8581	0.8552	0.8523
4	0.8494	0.8465	0.8437	0.8408	0.8380	0.8351	0.8323	0.8295	0.8266	0.8238	0.8210	0.8183
5	0.8155	0.8127	0.8099	0.8072	0.8045	0.8017	0.7990	0.7963	0.7936	0.7909	0.7882	0.7855
6	0.7829	0.7802	0.7776	0.7749	0.7723	0.7697	0.7671	0.7645	0.7619	0.7593	0.7567	0.7541
7	0.7516	0.7490	0.7465	0.7440	0.7414	0.7389	0.7364	0.7339	0.7314	0.7289	0.7265	0.7240
8	0.7215	0.7191	0.7166	0.7142	0.7118	0.7094	0.7070	0.7046	0.7022	0.6998	0.6974	0.6950
9	0.6927	0.6903	0.6880	0.6857	0.6833	0.6810	0.6787	0.6764	0.6741	0.6718	0.6695	0.6673
10	0.6650	0.6627	0.6605	0.6582	0.6560	0.6538	0.6516	0.6494	0.6472	0.6450	0.6428	0.6406
11	0.6384	0.6362	0.6341	0.6319	0.6298	0.6277	0.6255	0.6234	0.6213	0.6192	0.6171	0.6150
12	0.6129	0.6108	0.6087	0.6067	0.6046	0.6026	0.6005	0.5985	0.5964	0.5944	0.5924	0.5904
13	0.5884	0.5864	0.5844	0.5824	0.5804	0.5785	0.5765	0.5746	0.5726	0.5707	0.5687	0.5668
14	0.5649	0.5630	0.5610	0.5591	0.5572	0.5553	0.5535	0.5516	0.5497	0.5478	0.5460	0.5441
15	0.5423	0.5404	0.5386	0.5368	0.5350	0.5331	0.5313	0.5295	0.5277	0.5259	0.5242	0.5224
16	0.5206	0.5188	0.5171	0.5153	0.5136	0.5118	0.5101	0.5084	0.5066	0.5049	0.5032	0.5015
17	0.4998	0.4981	0.4964	0.4947	0.4930	0.4914	0.4897	0.4880	0.4864	0.4847	0.4831	0.4815
18	0.4798	0.4782	0.4766	0.4749	0.4733	0.4717	0.4701	0.4685	0.4669	0.4654	0.4638	0.4622
19	0.4606	0.4591	0.4575	0.4560	0.4544	0.4529	0.4513	0.4498	0.4483	0.4468	0.4452	0.4437

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

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