

Pd-103 Fact Sheet

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.

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

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}Pd ≥ 99.95%

All others ≤ 0.05%

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

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

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.

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
DAYS	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. MDS Nordion values may vary.

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