

Strontium-82 Radiochemical Strontium Chloride Solution

Strontium (Sr-82) Chloride Half-Life: 25.55 days

STRONTIUM-82 RADIOCHEMICAL STRONTIUM CHLORIDE SOLUTION

Strontium-82 is used exclusively to manufacture rubidium-82 generators. The generator system makes rubidium-82; the most convenient Positron Emission Tomography (PET) agent in myocardial perfusion imaging.

Nordion has a unique 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

Spallation by ~ 500 MeV protons
or ^{85}Rb (p, 4n) ^{82}Sr

Chemical Processing

Wet chemical separation of strontium
from molybdenum or rubidium

Assay

High resolution gamma spectrometry
at 776.5 keV via the Rb-82 daughter
at equilibrium

PRODUCT SPECIFICATION

Chemical Form

Strontium (II) in dilute hydrochloric acid

Normality

$0.1 \pm 0.05\text{N}$

Specific Activity*

No carrier added, $\geq 25 \text{ mCi/mg}$

Activity Concentration*

$\geq 50 \text{ mCi/mL}$

Radiopurity*

$\leq 5 \text{ mCi } ^{85}\text{Sr}/\text{mCi } ^{82}\text{Sr}$
 $\leq 0.15 \text{ mCi } ^{83}\text{Rb}/\text{mCi } ^{82}\text{Sr}$
 $\leq 0.15 \text{ mCi } ^{84}\text{Rb}/\text{mCi } ^{82}\text{Sr}$
 $\leq 0.0015 \text{ mCi } ^{83}\text{Sr}/\text{mCi } ^{82}\text{Sr}$

Others

$\leq 0.01 \text{ mCi other nuclides}/\text{mCi } ^{82}\text{Sr}$

*Radiopurity specifications are at 1200 h Eastern Time, seven (7) days after ship date. Activity specification is at 1200 h Eastern Time on ship date.

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

- Hypovial (10 mL, 20 mL)
- Octovial (1.5 mL)
(Other vial options are available).

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.



Strontium-82 Decay Table Half-Life: 25.55 days

DAYS	0	1	2	3	4	5	6	7	8	9
0	1.0000	0.9732	0.9472	0.9218	0.8972	0.8732	0.8498	0.8270	0.8049	0.7834
10	0.7624	0.7420	0.7221	0.7028	0.6840	0.6657	0.6479	0.6305	0.6137	0.5972
20	0.5812	0.5657	0.5505	0.5358	0.5215	0.5075	0.4939	0.4807	0.4678	0.4553
30	0.4431	0.4313	0.4197	0.4085	0.3976	0.3869	0.3766	0.3665	0.3567	0.3471
40	0.3378	0.3288	0.3200	0.3114	0.3031	0.2950	0.2871	0.2794	0.2719	0.2647
50	0.2576	0.2507	0.2440	0.2374	0.2311	0.2249	0.2189	0.2130	0.2073	0.2018
60	0.1964	0.1911	0.1860	0.1810	0.1762	0.1715	0.1669	0.1624	0.1581	0.1538
70	0.1497	0.1457	0.1418	0.1380	0.1343	0.1307	0.1272	0.1238	0.1205	0.1173
80	0.1141	0.1111	0.1081	0.1052	0.1024	0.0997	0.0970	0.0944	0.0919	0.0894
90	0.0870	0.0847	0.0824	0.0802	0.0781	0.0760	0.0739	0.0720	0.0700	0.0682
100	0.0663	0.0646	0.0628	0.0612	0.0595	0.0579	0.0564	0.0549	0.0534	0.0520
110	0.0506	0.0492	0.0479	0.0466	0.0454	0.0442	0.0430	0.0418	0.0407	0.0396
120	0.0386	0.0375	0.0365	0.0355	0.0346	0.0337	0.0328	0.0319	0.0310	0.0302
130	0.0294	0.0286	0.0278	0.0271	0.0264	0.0257	0.0250	0.0243	0.0237	0.0230
140	0.0224	0.0218	0.0212	0.0207	0.0201	0.0196	0.0190	0.0185	0.0180	0.0176
150	0.0171	0.0166	0.0162	0.0158	0.0153	0.0149	0.0145	0.0141	0.0138	0.0134
160	0.0130	0.0127	0.0123	0.0120	0.0117	0.0114	0.0111	0.0108	0.0105	0.0102
170	0.0099	0.0097	0.0094	0.0092	0.0089	0.0087	0.0084	0.0082	0.0080	0.0078
180	0.0076	0.0074	0.0072	0.0070	0.0068	0.0066	0.0064	0.0063	0.0061	0.0059
190	0.0058	0.0056	0.0055	0.0053	0.0052	0.0050	0.0049	0.0048	0.0046	0.0045

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

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