

# 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.

BWXT 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  $\sim 500$  MeV protons  
or  $^{85}\text{Rb}$  (p, 4n)  $^{82}\text{Sr}$

**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,  $\geq 25$  mCi/mg

**Activity Concentration\***  
 $\geq 50$  mCi/mL

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

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

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

BWXT has a world-class distribution system that includes a unique, software-based order management system. Carefully managed transportation logistics focus on products reaching their destinations 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. BWXT values may vary.

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