



## PRODUCT DATA

Element	Molybdenum-99
Mother Nuclide	Sodium Molybdate (Na <sup>99</sup> MoO <sub>4</sub> ) 5-50 GBq / Generator (Mo-99 radioactivity at calibration date)
Daughter Nuclide	Sodium ( <sup>99m</sup> Tc) pertechnetate (obtained from 99Mo/99mTc generator system.)
Half-life	6.02 hours
Shelf Life	21 days from the date of production for the generator 12 hours from elution time
Calibration Activities	10, 15, 20, 25, 30, 35, 45, 50 GBq Mo-99
Packaging	Generator set <ul style="list-style-type: none"> <li>• 1 unit <sup>99</sup>Mo/<sup>99m</sup>Tc radionuclide generator in the special package</li> <li>• Sterile %0.9 NaCl solution 10 ml or 5 ml (5 vial per each) in cardboard box packages.</li> <li>• 2x5 units of sterile evacuated vials in a cardboard box</li> <li>• 10 units of elution label for vial and 10 units of label for lead shield</li> <li>• 10 units of swap containing 70% isopropyl alcohol</li> <li>• Patient Information Leaflet</li> </ul>

SPECIFICATIONS	
Appearance	Clear, colorless solutions
Radiochemical Purity	Minimum 95% of total Tc-99m radioactivity
Identification	The most prominent gamma photon of technetium-99m has an energy of 0.141 MeV
Eluate	Sodium Pertechnetate ( <sup>99m</sup> Tc) Injection (Fission)
Iodine-131 (impurity A)	<sup>131</sup> I/ Total Radioactivity 5% $\times$ 10 <sup>-3</sup>
Molybdenum-99 (impurity B)	<sup>99</sup> Mo/ Total Radioactivity 0.1%
Ruthenium-103 (impurity C)	<sup>103</sup> Ru/ Total Radioactivity 5% $\times$ 10 <sup>-3</sup>

SPECIFICATIONS	
Beta emitting impurities	<sup>90</sup> Sr/ Total Radioactivity 6% $\times$ 10 <sup>-5</sup>
Strontium-89 (impurity D)	<sup>90</sup> Sr/ Total Radioactivity 6% $\times$ 10 <sup>-6</sup>
Gamma impurities/Total Radioactivity	0.01%
Alpha impurities/Total Radioactivity	1% $\times$ 10 <sup>-7</sup>
Aluminum	≤5 ppm
Bacterial Endotoxins (LAL)	0.25 IU / mL
pH	4.0 – 8.0
Sterility	Sterile

**TABLE OF <sup>99m</sup>Tc ACTIVITIES OBTAINED FROM MON.TEK <sup>99</sup>Mo/<sup>99m</sup>Tc GENERATORS**

DAYS	MON.TEK 5		MON.TEK 10		MON.TEK 15		MON.TEK 20		MON.TEK 25		MON.TEK 30		MON.TEK 35		MON.TEK 40	
	mCi	MBq	mCi	MBq	mCi	MBq	mCi	MBq	mCi	MBq	mCi	MBq	mCi	MBq	mCi	MBq
-6	543	20.091	1079	39.923	1631	60.347	2.183	80.771	2.734	101.158	3.286	121.582	3.838	142.006	4.390	162.430
-5	418	15.466	831	30.747	1256	46.472	1680	62.160	2.105	77.885	2.530	93.610	2.955	109.335	3.380	125.060
-4	322	11.914	640	23.680	967	35.779	1294	47.878	1.621	59.977	1.948	72.076	2.275	84.175	2.602	96.274
-3	248	9.176	492	18.204	744	27.528	996	36.852	1.248	46.176	1.500	55.500	1.752	64.824	2.004	74.148
-2	191	7.067	379	14.023	573	21.201	767	28.379	961	35.557	1.155	42.735	1.349	49.913	1.543	57.091
-1	147	5.439	292	10.804	441	16.317	590	21.830	740	27.380	889	32.893	1.038	38.406	1.188	43.956
0	113	4.181	225	8.325	340	12.580	455	16.835	570	21.090	685	25.345	800	29.600	915	33.855
+1	87	3.219	173	6.401	261	9.657	350	12.950	438	16.206	527	19.499	616	22.792	704	26.048
+2	67	2.479	133	4.921	201	7.437	269	9.953	337	12.469	406	15.022	474	17.538	542	20.054
+3	52	1.924	102	3.774	155	5.735	207	7.659	260	9.620	312	11.544	365	13.505	417	15.429
+4	40	1.480	79	2.923	119	4.403	159	5.883	200	7.400	240	8.880	281	10.397	321	11.877
+5	31	1.147	60	2.220	92	3.404	123	4.551	154	5.698	185	6.845	216	7.992	247	9.139
+6	24	888	46	1.702	70	2.590	94	3.478	118	4.366	142	5.254	166	6.142	190	7.030
+7	18	666	36	1.332	54	1.998	73	2.701	91	3.367	109	4.033	128	4.736	146	5.402
+8	14	518	27	999	42	1554	56	2.072	70	2.590	84	3.108	98	3.626	113	4.181
+9	11	407	21	777	32	1184	43	1591	54	1998	65	2.405	76	2.812	87	3.219
+10	8	296	16	592	24	888	33	1.221	41	1517	50	1.850	58	2.146	67	2.479
+11	6	222	12	444	19	703	25	925	32	1.184	38	1.406	45	1.665	51	1.887
+12	5	185	9	333	14	518	19	703	24	888	29	1.073	34	1.258	39	1.443
+13	4	148	7	259	11	407	15	555	19	703	22	814	26	962	30	1.110
+14	3	111	5	185	8	296	11	407	14	518	17	629	20	740	23	851
+15	2	74	4	148	6	222	9	333	11	407	13	481	15	555	18	666

\*Elution Activity is the activity obtained from a generator eluted at 8 AM by at least 5 ml sodium chloride 9 mg/ml (0.9%) solution for injection that is not eluted during 24 hours.  
 \*\*The activity to be obtained are the 90-110% of the given activity amounts.

