



**Bijlage 7 Berekeningen terreingrensdosis volgens de rekenregels
AGIS**

TOTAAL OVERZICHT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51

1	943	41	429	469	477	483	484	503	512	511	51	509	597	558	564	572	58	588	595	611	607	613	617	622	625	628	628	65	611	61	628	627	624	62	618	61	605	608	609	604	577	569	59	553	543	524	523	518	507	498	469	46	472	462	454	444	438	43	422	418
2	521	40	469	471	469	515	518	524	524	584	584	583	573	587	58	583	607	610	622	609	628	64	603	588	601	603	603	603	621	647	648	628	622	604	603	609	610	610	610	607	577	585	523	549	529	58	51	581	601	492	491	463	447	428	421					
3	525	65	478	483	487	517	518	524	524	584	584	583	573	587	58	583	607	610	622	609	628	64	603	588	601	603	603	621	647	648	628	622	604	603	609	610	610	607	577	585	523	549	529	58	51	581	601	492	491	463	447	428	421							
4	488	49	488	488	528	518	51	541	527	524	584	584	583	573	587	58	583	607	610	622	609	628	64	603	588	601	603	603	621	647	648	628	622	604	603	609	610	610	607	577	585	523	549	529	58	51	581	601	492	491	463	447	428	421						
5	486	487	487	518	511	543	555	564	568	574	58	603	617	627	601	604	607	61	621	608	608	61	721	711	761	761	764	768	767	772	771	771	769	769	769	769	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773						



Terrein grens

161 uSwj

ID

161 uSwj

MID

161 uSwj

AID

2 uSwj

STAP 01 ONTVANGST GOEDEREN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60



- Terrein grens
- 46 uSvJ
- ONDER SECUNDAIR NIVEAU
- BOVEN SECUNDAIR NIVEAU
- BOVEN 100uSv NIET VERBODEN

Duur [h]	03:00
Dosis µSv/h @1m	183

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
1	36	23	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	65	0,00E+00	6,10E+01
1	36	23	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	65	2,58E-05	3,53E-03
1	36	23	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	89,5	4,81E-07	8,47E-02
1	36	23	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	65	0,00E+00	0,00E+00
1	36	23	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	65	0,00E+00	0,00E+00
1	36	23	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01	65	7,20E-12	7,03E-11
1	36	23	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02	65	2,63E-02	3,37E+00
1	36	23	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01	89,5	1,17E-04	1,45E-01
1	36	23	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	65	1,84E-06	5,15E-04
1	36	23	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	89,5	4,45E-05	5,26E-01
1	36	23	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01	65	2,48E-10	1,30E-08
1	36	23	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	65	0,00E+00	0,00E+00
1	36	23	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01	89,5	1,00E-03	7,98E+00
1	36	23	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	65	8,01E-26	8,94E-21
1	36	23	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	65	8,01E-26	0,00E+00
1	36	23	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	65	6,37E-08	2,29E-03
1	36	23	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02	89,5	5,32E-03	4,07E+00
1	36	23	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01	65	1,00E-100	2,74E-99
1	36	23	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	65	4,96E-05	2,66E-01
1	36	23	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00	65	7,03E-86	2,81E-83
1	36	23	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01	65	8,33E-12	6,33E-08
1	36	23	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02	89,5	7,19E-03	6,90E+00
1	36	23	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	65	0,00E+00	0,00E+00
1	36	23	Lu-177	8,59E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	65	8,92E-24	1,06E-19
1	36	23	Re-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,69E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01	65	1,18E-06	4,73E-04
1	36	23	Re-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	89,5	1,53E-03	1,37E+01
1	36	23	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	65	5,99E-73	4,50E-66
1	36	23	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	65	1,25E-63	6,60E-61
TOTAAL ISOTOPEN															
1	36	23	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01	65	6,408E-09	4,18E-06
1	36	23	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01	65	1,50131E-09	9,01E-09
TOTAAL ALPHA'S															
1	36	23	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00						100		
1	36	23	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01	100	4,82451E-05	2,41E+01
TOTAAL GENERATOREN															
1	36	23	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	36	23	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	36	23	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	36	23	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	36	23	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	36	23	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

STAP 02 ONTVANGST GOEDEREN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60



- Terrein grens
- 44 uSvJ
- ONDER SECUNDAIR NIVEAU
- BOVEN SECUNDAIR NIVEAU
- BOVEN 100uSv NIET VERBODEN

Duur [h]	00:15
Dosis µSv/h @1m	438

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
	26	27	RAS												1,75E+03
1	26	27	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	15	1,02E-01	1,39E+01
1	26	27	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	39,5	1,66E-03	2,92E+02
1	26	27	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01	15	2,75E-03	2,68E-02
1	26	27	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02	15	4,92E-01	6,30E+01
1	26	27	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01	39,5	7,11E-03	8,82E+00
1	26	27	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	15	8,82E-03	2,47E+00
1	26	27	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	39,5	6,25E-03	7,38E+01
1	26	27	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01	15	3,88E-03	2,04E-01
1	26	27	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01	39,5	4,74E-02	3,79E+02
1	26	27	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-01
1	26	27	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	0,00E+00
1	26	27	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	15	5,70E-03	2,05E+02
1	26	27	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02	39,5	6,37E-02	4,87E+01
1	26	27	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01	15	1,00E-100	2,74E-99
1	26	27	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	15	4,81E-02	2,58E+02
1	26	27	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00	15	2,24E-20	8,93E-18
1	26	27	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01	15	1,46E-03	1,11E+01
1	26	27	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02	39,5	9,90E-02	9,50E+01
1	26	27	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	15	4,80E-06	3,71E-02
1	26	27	Re-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01	15	6,03E-03	2,41E+00
1	26	27	Re-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	39,5	3,09E-02	2,77E+02
1	26	27	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-10
1	26	27	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	15	3,05E-15	1,61E-12
TOTAAL ISOTOPEN															
1	26	27	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00
1	26	27	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01	15	3,57E-03	2,14E-02
TOTAAL ALPHA'S															
1	26	27	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00						100		
1	26	27	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01	100	4,82451E-05	2,41E+01
TOTAAL GENERATOREN															
1	26	27	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	26	27	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	26	27	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

STAP 03 VOOR TOEDIENINGSGEREED MAKEN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

1	841	820	830	835	838	840	845	847	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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- Terrein grens
- 22 uSvJ
- ONDER SECUNDAIR NIVEAU
- BOVEN SECUNDAIR NIVEAU
- BOVEN 100uSv NIET VERBODEN

Duur [h]	00:15
Dosis µSv/h @1m	259

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie-efficiëntie [-]	µSv/h @1m
			28 31 RAS												1,03E+03
1	28	31	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	28	31	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	15	1,02E-01	1,39E+01
1	28	31	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	50	2,96E-04	5,20E+01
1	28	31	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	28	31	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	28	31	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01	15	2,75E-03	2,68E-02
1	28	31	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02	15	4,92E-01	6,30E+01
1	28	31	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01	50	3,48E-03	4,31E+00
1	28	31	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	15	8,82E-03	2,47E+00
1	28	31	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	50	2,63E-03	3,10E+01
1	28	31	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01	15	3,88E-03	2,04E-01
1	28	31	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	28	31	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01	50	2,09E-02	1,65E+02
1	28	31	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-01
1	28	31	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	0,00E+00
1	28	31	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	15	5,70E-03	2,85E+02
1	28	31	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02	50	3,77E-02	2,88E+01
1	28	31	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01	15	1,00E-100	2,74E-99
1	28	31	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	15	4,81E-02	2,58E+02
1	28	31	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00	15	2,24E-20	8,93E-18
1	28	31	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01	15	1,46E-03	1,11E+01
1	28	31	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02	50	5,72E-02	5,49E+01
1	28	31	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	28	31	Lu-177	8,90E+04	1,78E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	15	4,80E-06	3,71E-02
1	28	31	Re-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,19E-01	9,97E+00	3,29E+01	15	6,03E-03	2,41E+00
1	28	31	Re-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	50	1,55E-02	1,38E+02
1	28	31	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-10
1	28	31	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	15	3,05E-15	1,61E-12
TOTAAL ISOTOPEN															
1	28	31	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00
1	28	31	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01	15	3,57E-03	2,14E-02
TOTAAL ALPHA'S															
1	28	31	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	28	31	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	28	31	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	28	31	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	28	31	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															



Terrein grens

0 uSv/j

ONDER
SECUNDAIR
NIVEAU

BOVEN
SECUNDAIR
NIVEAU

BOVEN
100uSv
NIET
VERBODEN

Duur [h]	00:15
Dosis µSv/h @1m	3

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
	29	40	RAS												1,37E+01
1	29	40	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	29	40	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	29	40	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01			
1	29	40	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02			
1	29	40	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01			
1	29	40	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	29	40	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	15	1,16E-01	1,37E+01
1	29	40	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01			
1	29	40	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01			
1	29	40	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-03
1	29	40	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	29	40	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	29	40	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02			
1	29	40	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01			
1	29	40	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01			
1	29	40	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00			
1	29	40	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01			
1	29	40	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02			
1	29	40	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Lu-177	8,59E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	29	40	Ra-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,16E-01	9,97E+00	3,29E+01			
1	29	40	Ra-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	29	40	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-12
1	29	40	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	29	40	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01			
1	29	40	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01			
TOTAAL ALPHA'S															
1	29	40	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	29	40	Mn-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	29	40	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	29	40	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	29	40	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	29	40	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

1% Hoeveelheid naar QC

STAP 05 MICROBIOLOGIE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

32



Terrein grens

0 uSv/j

ONDER SECUNDAIR NIVEAU

BOVEN SECUNDAIR NIVEAU

BOVEN 100uSv NIET VERBODEN

Duur [h]	00:15
Dosis µSv/h @1m	0

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
			32 33 RAS												1,37E+00
1	32	33	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	32	33	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	32	33	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01			
1	32	33	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02			
1	32	33	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01			
1	32	33	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	32	33	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	15	1,16E-01	1,37E+00
1	32	33	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01			
1	32	33	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01			
1	32	33	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-04
1	32	33	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	32	33	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	32	33	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02			
1	32	33	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01			
1	32	33	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01			
1	32	33	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00			
1	32	33	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01			
1	32	33	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02			
1	32	33	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	32	33	Ra-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,16E-01	9,97E+00	3,29E+01			
1	32	33	Ra-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	32	33	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-13
1	32	33	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	32	33	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01			
1	32	33	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01			
TOTAAL ALPHA'S															
1	32	33	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	32	33	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	32	33	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	32	33	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	32	33	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	32	33	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

0,1% Hoeveelheid naar Microbiologie

STAP 06 AFVAL

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60



Terrein grens

36 uSvJ

ONDER SECUNDAIR NIVEAU

BOVEN SECUNDAIR NIVEAU

BOVEN 100uSv NIET VERBODEN

Duur [h]	8760:00
Dosis µSv/h @1m	249

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
			33 30 RAS												5,13E+00
1	33	30	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	50	0,00E+00	0,00E+00
1	33	30	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	50	2,98E-04	4,05E-03
1	33	30	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	100	8,73E-08	1,54E-03
1	33	30	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	50	0,00E+00	0,00E+00
1	33	30	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	50	0,00E+00	0,00E+00
1	33	30	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01	50	2,68E-09	2,62E-09
1	33	30	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02	100	3,09E-03	3,91E-02
1	33	30	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01	100	4,05E-05	5,02E-03
1	33	30	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	50	3,87E-05	1,08E-03
1	33	30	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	50	2,63E-03	3,10E+00
1	33	30	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01	50	4,08E-08	2,14E-07
1	33	30	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	50	0,00E+00	0,00E+00
1	33	30	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01	100	4,45E-04	3,50E-01
1	33	30	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	50	4,95E-20	5,53E-16
1	33	30	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	50	4,95E-20	0,00E+00
1	33	30	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	50	2,92E-06	1,05E-02
1	33	30	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02	100	3,20E-03	2,45E-01
1	33	30	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01	50	1,00E-100	2,74E-100
1	33	30	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	50	4,88E-04	6,02E-01
1	33	30	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00	50	3,15E-66	1,26E-64
1	33	30	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01	50	3,00E-09	2,28E-06
1	33	30	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02	100	4,08E-03	3,91E-01
1	33	30	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	50	0,00E+00	0,00E+00
1	33	30	Lu-177	8,59E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	50	1,89E-18	2,21E-15
1	33	30	Re-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01	50	2,78E-05	1,10E-03
1	33	30	Re-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	100	8,02E-04	7,18E-01
1	33	30	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	50	2,78E-56	2,09E-50
1	33	30	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	50	4,10E-49	2,17E-47
TOTAAL ISOTOPEN															
1	33	30	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01	50	4,98E-07	3,25E-05
1	33	30	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01	50	1,63E-07	9,79E-08
TOTAAL ALPHA'S															
1	33	30	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	33	30	Mn-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	33	30	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	33	30	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	33	30	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	33	30	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	33	30	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	33	30	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

10% Hoeveelheid naar afval

STAP 07 VERZENDING GOEDEREN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60



- Terrein grens
- 43 uSvJ
- ONDER SECUNDAIR NIVEAU
- BOVEN SECUNDAIR NIVEAU
- BOVEN 100uSv NIET VERBODEN

Duur [h]	00:15
Dosis µSv/h @1m	432

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher-ming [mm Pb]	Transmissi e-fit [-]	µSv/h @1m
			26 27 RAS												1,73E+03
1	26	27	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	15	1,02E-01	1,39E+01
1	26	27	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01	39,5	1,66E-03	2,92E+02
1	26	27	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01	15	2,75E-03	2,68E-02
1	26	27	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02	15	4,92E-01	6,30E+01
1	26	27	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01	39,5	7,11E-03	8,82E+00
1	26	27	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	15	8,82E-03	2,47E+00
1	26	27	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	39,5	6,25E-03	7,38E+01
1	26	27	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01	15	3,88E-03	2,04E-01
1	26	27	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01	39,5	4,74E-02	3,79E+02
1	26	27	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-01
1	26	27	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	0,00E+00
1	26	27	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	15	5,70E-03	2,05E+02
1	26	27	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02	39,5	6,37E-02	4,87E+01
1	26	27	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01	15	1,00E-100	2,74E-99
1	26	27	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	15	4,81E-02	2,58E+02
1	26	27	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00	15	2,24E-20	8,93E-18
1	26	27	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01	15	1,46E-03	1,11E+01
1	26	27	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02	39,5	9,90E-02	9,50E+01
1	26	27	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	26	27	Lu-177	8,59E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	15	4,80E-06	3,71E-02
1	26	27	Re-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01	15	6,03E-03	2,41E+00
1	26	27	Re-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	39,5	3,09E-02	2,77E+02
1	26	27	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-10
1	26	27	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	15	3,05E-15	1,61E-12
TOTAAL ISOTOPEN															
1	26	27	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00
1	26	27	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01	15	3,57E-03	2,14E-02
TOTAAL ALPHA'S															
1	26	27	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	26	27	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	26	27	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	26	27	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	26	27	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	26	27	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

STAP 08 OPSLAG GENERATOREN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

26



- Terrein grens
- 12 uSvJ
- ONDER SECUNDAIR NIVEAU
- BOVEN SECUNDAIR NIVEAU
- BOVEN 100uSv NIET VERBOD

Duur [h]	8760:00
Dosis µSv/h @1m	139

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
			RAS												1,45E+00
1	28	31	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	28	31	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,96E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	28	31	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01			
1	28	31	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02			
1	28	31	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01			
1	28	31	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	28	31	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01			
1	28	31	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01			
1	28	31	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01			
1	28	31	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	28	31	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	28	31	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	28	31	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02			
1	28	31	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01			
1	28	31	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01			
1	28	31	Xe-133	1,11E+03	2,22E+04	1,28E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00			
1	28	31	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01			
1	28	31	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02			
1	28	31	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	28	31	Ra-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01			
1	28	31	Ra-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	28	31	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00			
1	28	31	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	28	31	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01			
1	28	31	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	1,21E+00	1,21E+00	9,26E+00	2,21E+01			
TOTAAL ALPHA'S															
1	28	31	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	28	31	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01	100	4,82451E-05	1,45E+00
TOTAAL GENERATOREN															
1	28	31	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	28	31	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	28	31	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	28	31	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

Generatoren blijven niet in de apotheek, maar worden omgeruild

STAP 09 OPSLAG CALBRATIE BRONNEN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

27



Terrein grens

0 uSv/j

ONDER SECUNDAIR NIVEAU

BOVEN SECUNDAIR NIVEAU

BOVEN 100uSv NIET VERBODEN

Duur [h]	8760:00
Dosis µSv/h @1m	1

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [-]	µSv/h @1m
1	27	33	RAS												2,23E-04
1	27	33	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	27	33	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	27	33	F-18	2,00E+05	1,00E+06	1,83E+00	1,76E+02	4,95E+00	9,46E+00	1,51E+01	2,89E+01	4,25E+01			
1	27	33	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	27	33	S-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	27	33	Cr-51	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,18E+01	1,75E+01			
1	27	33	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	8,09E+01	1,18E+02			
1	27	33	Cu-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,45E+01	6,83E+01			
1	27	33	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	27	33	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01			
1	27	33	Se-75	3,70E+01	7,40E+02	2,88E+03	7,10E+01	9,85E-01	2,29E+00	4,32E+00	1,13E+01	2,03E+01			
1	27	33	Sr-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	27	33	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	8,95E+01			
1	27	33	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	27	33	In-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,50E-01	1,96E+00	4,82E+00	7,77E+00			
1	27	33	I-123	5,00E+03	7,50E+05	1,32E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	27	33	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,65E+01	1,24E+02			
1	27	33	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E-02	3,90E-02	6,23E-02	1,24E-01	1,93E-01			
1	27	33	I-131	4,00E+03	8,00E+04	1,93E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01			
1	27	33	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,29E+00			
1	27	33	Sm-153	1,80E+04	4,00E+05	4,67E+01	1,90E+01	8,76E-02	2,04E-01	4,32E-01	1,67E+00	1,76E+01			
1	27	33	Ho-166	8,00E+03	1,60E+05	2,68E+01	6,00E+00	5,68E+00	2,06E+01	3,93E+01	8,34E+01	1,26E+02			
1	27	33	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	27	33	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	5,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	27	33	Ra-186	8,14E+02	1,60E+05	9,08E+01	4,00E+00	2,68E-01	5,30E-01	9,18E-01	9,97E+00	3,29E+01			
1	27	33	Ra-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	27	33	Tc-99m	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00			
1	27	33	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	27	33	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,90E-01	1,92E+00	4,22E+00	1,22E+01	2,38E+01			
1	27	33	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,26E+00	2,21E+01			
TOTAAL ALPHA'S															
1	27	33	Ce-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	27	33	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	27	33	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01	56	1,00E-07	3,55E-06
1	27	33	Sr-90	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	0,00E+00
1	27	33	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	0,00E+00
1	27	33	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01	56	3,61E-09	2,46E-08
1	27	33	Cs-137	7,40E+01	1,48E+02	2,63E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	0,00E+00
1	27	33	Eu-152	3,70E-02	7,40E-02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02	56	3,14E-02	2,20E-04
TOTAAL CALIBRATIE BRONNEN															

50% Aantal aanwezige bronnen

TOTAAL OVERZICHT

Kinderdagverblijf Dromenland...

GE Health Radiopharm

kdv

38 uSv]

ID

38 uSv]

MID

9 uSv]

AID

1 uSv]

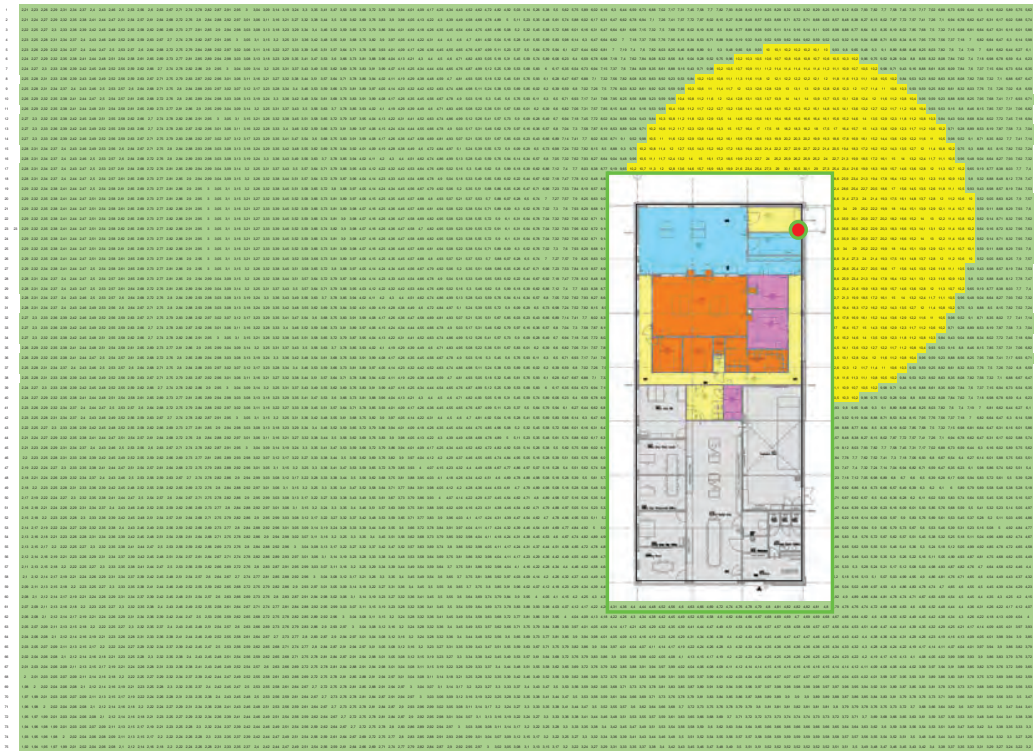
TOTAAL OVERZICHT

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- KDV
- 37 uSvJ
- ID
- 37 uSvJ
- MID
- 9 uSvJ
- AID
- 1 uSvJ

STAP 01 ONTVANGST GOEDEREN

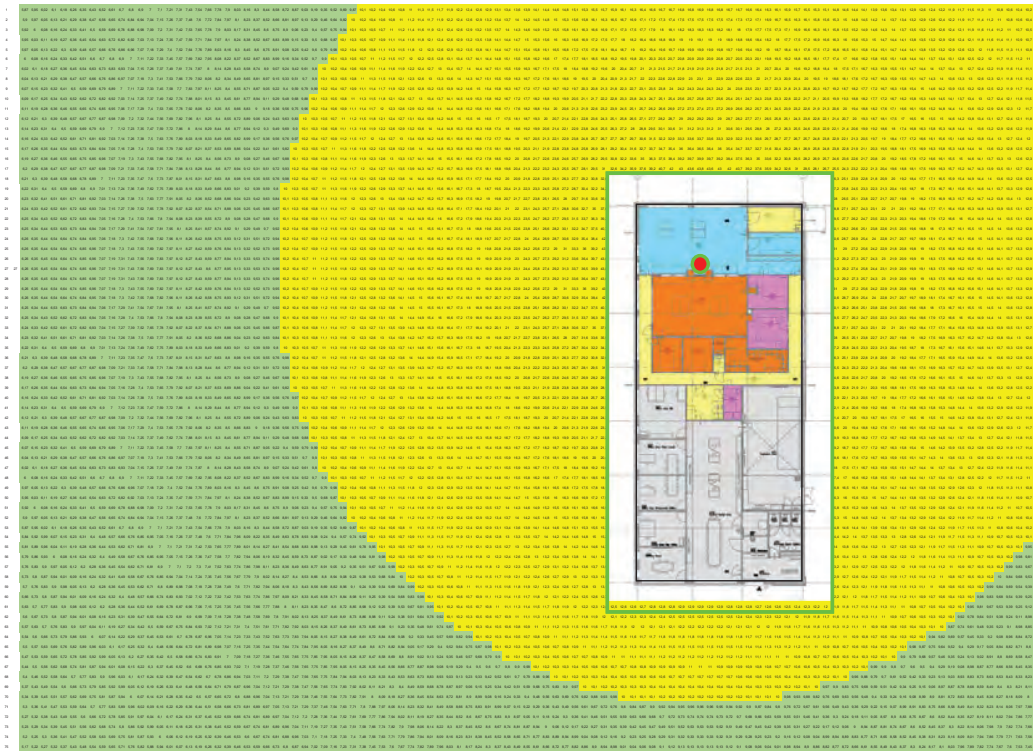


- Terrein grens
- 46 i.s.v.
- ONDER SCHEDEWEG
- BOVEN SCHEDEWEG
- OPPERSTEL

Duur [h]	03.00
Dosis µSv/h @1m	183

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher-ming [mm Pb]	Transmis-sie [I]	µSv/h @1m
1	81	23	H-3	3.70E+01	7.40E+02	1.08E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	65	0.00E+00	6.10E+01
1	81	23	C-11	3.70E+01	7.40E+02	3.40E-01	1.85E+02	4.95E+00	9.48E+00	1.51E+01	2.89E+01	4.25E+01	65	2.58E-05	3.53E-03
1	81	23	F-18	2.00E+05	1.00E+06	1.50E+00	1.70E+02	4.95E+00	9.48E+00	1.51E+01	2.89E+01	4.25E+01	89.5	4.81E-01	6.47E-02
1	81	23	P-32	2.00E+02	2.00E+03	3.43E+02	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	65	0.00E+00	0.00E+00
1	81	23	B-35	2.00E+02	7.40E+02	2.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	65	0.00E+00	0.00E+00
1	81	23	Co-51	8.14E+01	1.63E+03	6.65E+02	6.00E+00	1.92E+00	3.74E+00	6.07E+00	1.18E+01	1.75E+01	65	7.25E-12	7.03E-11
1	81	23	Fe-59	3.70E+01	7.40E+02	1.07E+03	1.73E+02	1.47E+01	2.73E+01	4.31E+01	6.09E+01	1.18E+02	65	2.63E-02	3.37E+00
1	81	23	Co-64	2.00E+03	4.00E+04	1.27E+01	3.10E-01	5.11E+00	9.81E+00	1.60E+01	3.40E+01	6.03E+01	89.5	1.17E-04	1.40E-01
1	81	23	Ga-67	5.00E+02	1.00E+04	7.83E-01	2.80E+01	8.61E-01	2.23E+00	4.80E+00	1.39E+01	3.40E+01	65	1.84E-06	5.19E-04
1	81	23	Ga-68	2.00E+04	6.00E+04	1.13E+00	1.97E+02	5.12E+00	9.84E+00	1.60E+01	3.38E+01	6.17E+01	89.5	4.43E-05	5.00E-01
1	81	23	Se-75	3.70E+01	7.40E+02	2.86E+03	7.10E+01	9.95E-01	2.22E+00	4.32E+00	1.13E+01	2.02E+01	65	2.45E-10	1.33E-09
1	81	23	Sr-89	6.00E+02	1.20E+04	1.21E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	65	0.00E+00	0.00E+00
1	81	23	Zr-89	2.00E+03	4.00E+04	7.84E+01	1.97E+02	9.02E+00	1.81E+01	2.99E+01	5.95E+01	9.95E+01	89.5	1.00E-03	7.88E+00
1	81	23	In-111	6.00E+04	1.20E+06	6.79E+01	9.30E+01	2.57E-01	9.59E-01	1.96E+00	4.82E+00	7.77E+00	65	8.01E-26	8.94E-21
1	81	23	In-111	6.00E+03	0.00E+00	6.79E+01	9.30E+01	2.57E-01	9.59E-01	1.96E+00	4.82E+00	7.77E+00	65	8.01E-26	0.00E+00
1	81	23	I-123	5.00E+03	7.00E+05	1.30E+01	4.80E+01	6.67E-02	4.42E-01	1.12E+00	1.11E+01	2.71E+01	65	6.37E-08	2.20E-03
1	81	23	I-124	4.00E+02	4.00E+03	1.00E+02	1.91E+02	7.20E+00	1.95E+01	3.05E+01	7.65E+01	1.24E+02	89.5	5.33E-03	4.07E+00
1	81	23	I-125	3.70E+01	7.40E+02	1.44E+03	3.70E+01	2.11E+02	3.92E-02	6.23E-02	1.24E+01	1.93E+01	65	1.00E-100	2.74E-99
1	81	23	I-131	4.00E+03	8.00E+04	1.93E+02	6.70E+01	2.74E+00	5.58E+00	9.03E+00	2.59E+01	4.52E+01	65	4.96E-05	2.66E-01
1	81	23	Xe-133	1.11E+03	2.22E+04	1.26E+02	1.80E+01	3.79E+02	9.82E-02	4.00E-01	1.35E+00	2.20E+00	65	7.03E-86	2.81E-83
1	81	23	Sr-133	1.80E+04	4.00E+05	4.87E+01	1.90E+01	8.78E+02	2.04E-01	4.32E-01	1.67E+00	1.70E+01	65	8.33E-12	8.33E-08
1	81	23	Hg-196	8.00E+03	1.60E+05	2.86E+01	6.00E+00	5.68E+00	2.88E+01	3.93E+01	8.34E+01	1.20E+02	89.5	7.03E-03	6.00E+00
1	81	23	Es-189	3.70E+01	7.40E+02	2.23E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	65	0.00E+00	0.00E+00
1	81	23	Lu-177	8.50E+02	1.70E+05	1.81E+02	7.00E+00	9.42E-01	1.18E+00	2.11E+00	4.70E+00	8.46E+00	65	8.92E-24	1.00E-19
1	81	23	Rb-186	8.14E+02	1.63E+05	9.06E+01	4.00E+00	2.86E-01	5.36E-01	9.18E-01	9.97E+00	3.20E+01	65	1.19E-06	4.79E-04
1	81	23	Rb-188	4.07E+04	8.14E+05	1.70E+01	1.10E+01	2.54E+00	9.98E+00	2.17E+01	5.68E+01	9.69E+01	89.5	1.53E-03	1.37E+01
1	81	23	Tl-201	1.20E+03	2.40E+04	7.31E+01	2.20E+01	2.58E-01	5.23E-01	8.87E-01	1.94E+00	3.10E+00	65	1.25E-63	6.05E-61
TOTAAL ISOTOPEN															
1	81	23	Ra-223	1.50E+02	2.25E+04	2.74E+02	2.90E+01	6.00E-01	1.50E+00	4.22E+00	1.22E+01	2.38E+01	65	6.40E-09	4.18E-06
1	81	23	Ac-225	2.00E+01	1.00E+03	2.40E+02	6.00E+00	6.98E-02	4.59E-01	1.21E+00	9.20E+00	2.21E+01	65	1.50131E-09	9.01E-09
TOTAAL ALPHA'S															
1	81	23	Co-60	2.00E+04	6.00E+04	6.91E+03	0.00E+00						100		
1	81	23	Mo-99	1.20E+06	2.00E+07	6.60E+01	2.50E+01	5.83E+00	1.37E+01	2.34E+01	4.68E+01	6.95E+01	100	4.82451E-05	2.41E+01
TOTAAL GENERATOREN															
1	81	23	Co-57	1.48E+03	2.96E+03	6.50E+03	2.40E+01	2.98E-01	5.33E-01	8.50E-01	2.39E+00	2.40E+01			
1	81	23	Se-60	7.40E+01	1.48E+02	2.55E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	81	23	Y-90	7.40E+01	1.48E+02	6.40E+01	2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	81	23	Ba-133	7.40E+01	1.48E+02	9.41E+04	9.20E+01	8.19E-01	2.84E+00	5.65E+00	1.27E+01	1.99E+01			
1	81	23	Co-137	7.40E+01	1.48E+02	2.93E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	81	23	Eu-152	3.70E+02	7.40E+02	1.17E+05	1.89E+02	9.52E+00	2.15E+01	3.67E+01	7.51E+01	1.14E+02			
TOTAAL CALIBRATE BRONNEN															

STAP 02 ONTVANGST GOEDEREN



- Terrein grens
- 44 uS(u)
- ONDER SCHEDE
- BONEN SCHEDE
- BOVEN SCHEDE

Duur [h]	00:15
Dosis $\mu\text{Sv/h}$ @1m	438

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [l]	$\mu\text{Sv/h}$ @1m
TOTAAL ISOTOPEN															
1	71	27	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00
1	71	27	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,58E-01	1,21E+00	9,20E+00	2,21E+01	15	3,97E-03	2,14E-02
TOTAAL ALPHA'S															
1	71	27	Co-60	2,00E+04	6,00E+04	5,91E+03	0,00E+00						100		
1	71	27	Mo-99	1,20E+08	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01	100	4,82451E-05	2,41E+01
TOTAAL GENERATOREN															
1	71	27	Co-57	1,48E+03	2,98E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	71	27	Bi-210	7,48E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	71	27	Y-90	7,48E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	71	27	Ba-133	7,48E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	71	27	Cs-137	7,48E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	71	27	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATE BRONNEN															

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Terrein grens

22 uSv]

ONDER-SCHOUWING INSAU

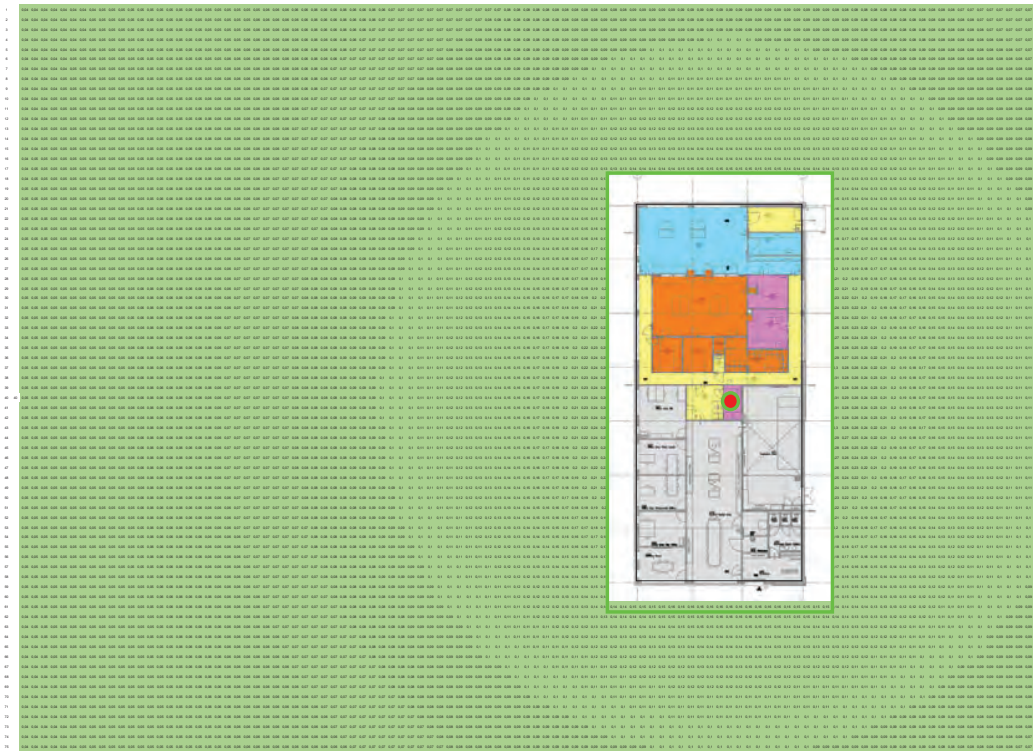
BOVEN-SCHOUWING INSAU

BOVEN-SCHOUWING INSAU

BOVEN-SCHOUWING INSAU

Duur [h]	00:15
Dosis $\mu\text{Sv/h}$ @1m	259

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher- ming [mm Pb]	Transmis- sion e-fit [L]	$\mu\text{Sv/h}$ @1m
1	73	31	RAS												1,00E+03
1	73	31	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	73	31	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01	15	1,02E-01	1,39E+01
1	73	31	F-18	2,00E+05	1,00E+06	1,50E+00	1,70E+02	4,50E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01	50	2,96E-04	5,20E-01
1	73	31	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	73	31	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	73	31	Co-51	8,14E+01	1,63E+03	6,60E+02	6,00E+00	1,50E+00	3,74E+00	6,07E+00	1,19E+01	1,75E+01	15	2,75E-03	2,69E-02
1	73	31	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02	15	4,92E-01	6,00E+01
1	73	31	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,40E+01	6,03E+01	50	3,48E-03	4,31E+00
1	73	31	Ga-67	5,00E+02	1,00E+04	7,83E-01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	15	8,85E-03	2,47E+00
1	73	31	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,94E+00	1,60E+01	3,38E+01	6,17E+01	50	2,63E-03	3,10E+01
1	73	31	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E-01	2,22E+00	4,32E+00	1,13E+01	2,02E+01	15	3,89E-03	2,04E-01
1	73	31	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	73	31	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	9,95E+01	50	2,09E-02	1,60E+02
1	73	31	Is-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,59E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,90E-01
1	73	31	Is-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,59E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	0,00E+00
1	73	31	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	15	5,70E-03	2,02E+02
1	73	31	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,69E+01	1,24E+02	50	3,77E-02	2,89E+01
1	73	31	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,90E-02	6,23E-02	1,24E+01	1,93E-01	15	1,00E-100	2,74E-99
1	73	31	I-131	4,00E+03	8,00E+04	1,50E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	15	4,81E-02	2,59E-02
1	73	31	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,20E+00	15	2,24E-20	8,03E-18
1	73	31	Sr-133	1,80E+04	4,00E+05	4,87E+01	1,90E+01	8,78E-02	2,04E-01	4,32E-01	1,67E+00	1,70E+01	15	1,48E-03	1,11E+01
1	73	31	Hg-196	8,00E+03	1,60E+05	2,89E+01	6,00E+00	5,69E+00	2,88E+01	3,93E+01	8,34E+01	1,20E+02	50	5,23E-02	5,69E+01
1	73	31	Es-189	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00
1	73	31	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	9,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	15	4,80E-06	5,71E-02
1	73	31	Rb-186	8,14E+02	1,63E+05	9,06E+01	4,00E+00	2,86E-01	5,36E-01	9,18E-01	9,97E+00	3,20E+01	15	6,09E-03	2,41E+00
1	73	31	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	50	1,56E-02	1,38E+02
1	73	31	Tl-201	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E-01	5,35E-01	9,05E-01	1,80E+00	2,70E+00	15	2,15E-17	1,62E-10
1	73	31	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,50E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	15	3,05E-15	1,61E-12
TOTAAL ISOTOPEN															
1	73	31	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00
1	73	31	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,20E+00	2,21E+01	15	3,97E-03	2,14E-02
TOTAAL ALPHA'S															
1	73	31	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	73	31	Mo-99	1,20E+08	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	73	31	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	73	31	Se-60	7,40E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	73	31	Co-137	7,40E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATE BRONNEN															



- Terrain grens
- 0 u[sv]
- ONDER SCHEDEWEG INEASU
- BONEN SCHEDEWEG INEASU
- ROOD WEG

Duur [h]	00:15
Dosis µSv/h @1m	3

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO µSv/h per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher- ming [mm Pb]	Transmis- sion e-fit [L]	µSv/h @1m
1	74	40	RAS												1,37E+01
1	74	40	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	74	40	F-18	2,00E+05	1,00E+06	1,50E+00	1,70E+02	4,50E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	74	40	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Co-51	8,14E+01	1,63E+03	6,60E+02	6,00E+00	1,50E+00	3,74E+00	6,07E+00	1,19E+01	1,79E+01			
1	74	40	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02			
1	74	40	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,49E+01	6,03E+01			
1	74	40	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E+01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	74	40	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	15	1,16E-01	1,37E+01
1	74	40	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E+01	2,22E+00	4,32E+00	1,13E+01	2,02E+01			
1	74	40	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	9,95E+01			
1	74	40	Ir-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E+01	9,95E+01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-03
1	74	40	Ir-111	6,00E+03	0,00E+00	6,79E+01	9,30E+01	2,57E+01	9,95E+01	1,96E+00	4,82E+00	7,77E+00			
1	74	40	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E+02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	74	40	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,95E+01	3,05E+01	7,65E+01	1,24E+02			
1	74	40	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,90E-02	6,23E-02	1,24E+01	1,93E+01			
1	74	40	I-131	4,00E+03	8,00E+04	1,50E+02	6,70E+01	2,74E+00	5,58E+00	9,00E+00	2,59E+01	4,52E+01			
1	74	40	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E+02	9,82E-02	4,00E-01	1,35E+00	2,20E+00			
1	74	40	Sr-133	1,80E+04	4,00E+05	4,87E+01	1,90E+01	8,78E+02	2,04E-01	4,32E-01	1,67E+00	1,70E+01			
1	74	40	Hg-196	8,00E+03	1,60E+05	2,86E+01	6,00E+00	5,68E+00	2,08E+01	3,93E+01	8,34E+01	1,20E+02			
1	74	40	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Lu-177	8,50E+04	1,70E+06	1,81E+02	7,20E+00	9,42E+01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	74	40	Rb-186	8,14E+02	1,63E+05	9,06E+01	4,00E+00	2,86E+01	5,36E+01	9,18E+01	9,97E+00	3,20E+01			
1	74	40	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	74	40	Tl-201	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E+01	5,33E+01	9,05E+01	1,80E+00	2,70E+00	15	2,10E-17	1,62E-12
1	74	40	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E+01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	74	40	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01			
1	74	40	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,58E-01	1,21E+00	9,20E+00	2,21E+01			
TOTAAL ALPHA'S															
1	74	40	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	74	40	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	74	40	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E+01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	74	40	Se-60	7,40E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	74	40	Ca-137	7,40E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	74	40	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

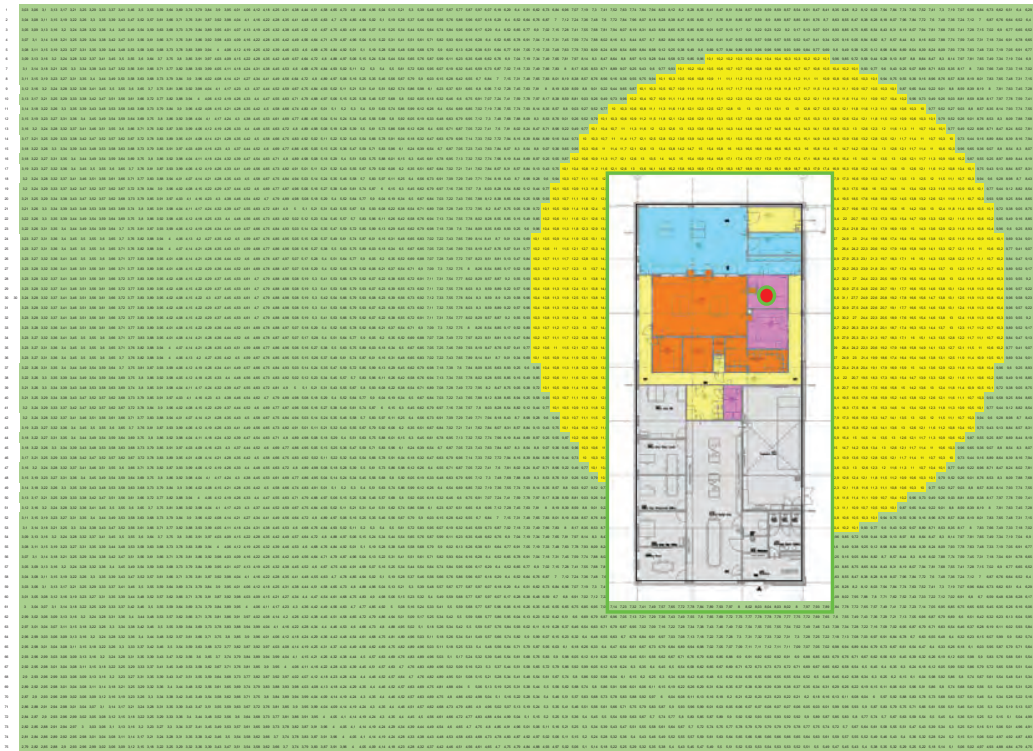
1% Hooftelheid naar QC



Duur [h]	00:15
Dosis $\mu\text{Sv/h}$ @1m	0

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher- ming [mm Pb]	Transmis- sion e-fit [E]	$\mu\text{Sv/h}$ @1m
1	77	33	RAS												1,37E+00
1	77	33	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	77	33	F-18	2,00E+05	1,00E+06	1,50E+00	1,70E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	77	33	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Co-51	8,14E+01	1,63E+03	6,60E+02	6,00E+00	1,90E+00	3,74E+00	6,07E+00	1,19E+01	1,79E+01			
1	77	33	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02			
1	77	33	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,49E+01	6,03E+01			
1	77	33	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E+01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	77	33	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	15	1,16E-01	1,37E+00
1	77	33	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E+01	2,22E+00	4,32E+00	1,13E+01	2,02E+01			
1	77	33	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	9,95E+01			
1	77	33	Ir-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E+01	9,59E+01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,80E-04
1	77	33	Ir-111	6,00E+03	0,00E+00	0,00E+00	6,79E+01	9,30E+01	2,57E+01	9,59E+01	1,96E+00	4,82E+00	7,77E+00		
1	77	33	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E+02	4,42E-01	1,12E+00	1,11E+01	2,71E+01			
1	77	33	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,96E+01	3,05E+01	7,65E+01	1,24E+02			
1	77	33	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,90E-02	6,23E-02	1,24E+01	1,93E+01			
1	77	33	I-131	4,00E+03	8,00E+04	1,90E+02	6,70E+01	2,74E+00	5,58E+00	9,90E+00	2,59E+01	4,53E+01			
1	77	33	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E+02	9,82E-02	4,00E+01	1,35E+00	2,20E+00			
1	77	33	Sr-133	1,80E+04	4,00E+05	4,87E+01	1,90E+01	8,78E+02	2,04E-01	4,32E-01	1,67E+00	1,70E+01			
1	77	33	Hg-196	8,00E+03	1,60E+05	2,86E+01	6,00E+00	5,68E+00	2,08E+01	3,93E+01	8,34E+01	1,20E+02			
1	77	33	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	9,42E+01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	77	33	Rb-186	8,14E+02	1,63E+05	9,06E+01	4,00E+00	2,86E+01	5,36E+01	9,18E+01	9,97E+00	3,20E+01			
1	77	33	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,66E+01			
1	77	33	Tl-201	1,20E+06	3,00E+08	6,02E+00	2,50E+01	2,34E+01	5,33E+01	9,05E+01	1,80E+00	2,70E+00	15	2,10E-17	1,62E-13
1	77	33	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,50E+01	2,58E+01	5,20E-01	8,87E-01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	77	33	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01			
1	77	33	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,20E+00	2,21E+01			
TOTAAL ALPHA'S															
1	77	33	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	77	33	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	77	33	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E+01	5,33E-01	8,50E-01	2,39E+00	2,40E+01			
1	77	33	Se-60	7,40E+01	1,48E+02	2,55E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	77	33	Ca-137	7,40E+01	1,48E+02	2,93E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	77	33	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

0,1% Hoofdeheid naar Microbiologie



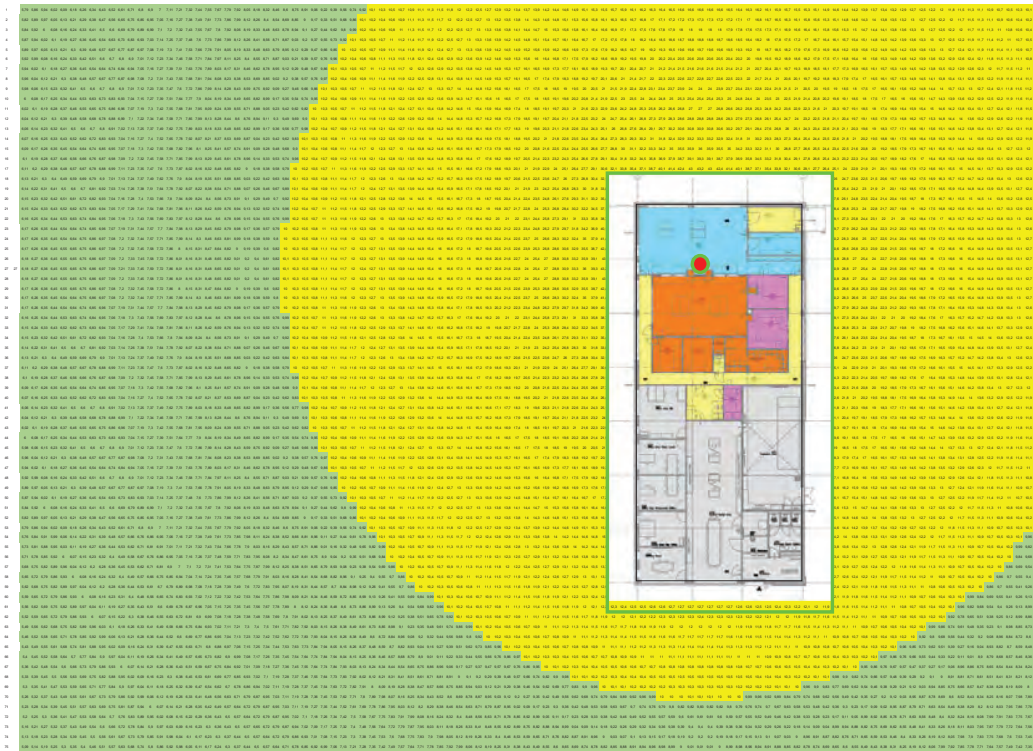
- Terrein grens
- 36 uSjV
- ONDER SCHEDEWEG INEWAU
- BOVEN SCHEDEWEG INEWAU
- ONDER KEST

Duur [h]	8760:00
Dosis $\mu\text{Sv/h}$ @1m	249

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit [L]	$\mu\text{Sv/h}$ @1m
1	78	30	RAS												5.13E+00
1	78	30	H-3	3.70E+01	7.40E+02	1.08E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	50		0.00E+00
1	78	30	C-11	3.70E+01	7.40E+02	3.40E-01	1.85E+02	4.95E+00	9.48E+00	1.51E+01	2.89E+01	4.25E+01	50	2.9E-04	4.05E-03
1	78	30	F-18	2.00E+05	1.00E+06	1.50E+00	1.70E+02	4.95E+00	9.48E+00	1.51E+01	2.89E+01	4.25E+01	100	8.73E-08	1.54E-03
1	78	30	P-32	2.00E+02	2.00E+03	3.43E+02	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	50		0.00E+00
1	78	30	S-35	2.00E+02	7.40E+02	2.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	50		0.00E+00
1	78	30	Co-51	8.14E+01	1.63E+03	6.65E+02	6.00E+00	1.92E+00	3.74E+00	6.07E+00	1.19E+01	1.75E+01	50	2.66E-09	2.60E-09
1	78	30	Fe-59	3.70E+01	7.40E+02	1.07E+03	1.73E+02	1.47E+01	2.73E+01	4.31E+01	6.09E+01	1.18E+02	100	3.06E-03	3.91E-02
1	78	30	Co-64	2.00E+03	4.00E+04	1.27E+01	3.10E+01	5.11E+00	9.81E+00	1.60E+01	3.40E+01	6.03E+01	100	4.03E-05	5.03E-03
1	78	30	Ga-67	5.00E+02	1.00E+04	7.83E-01	2.80E+01	8.61E-01	2.23E+00	4.80E+00	1.39E+01	3.40E+01	50	3.87E-05	1.09E-03
1	78	30	Ga-68	2.00E+04	6.00E+04	1.13E+00	1.97E+02	5.12E+00	9.84E+00	1.60E+01	3.38E+01	6.17E+01	50	2.63E-03	3.10E+00
1	78	30	Se-75	3.70E+01	7.40E+02	2.86E+03	7.10E+01	9.95E-01	2.22E+00	4.32E+00	1.13E+01	2.02E+01	50	4.05E-08	2.14E-07
1	78	30	Sr-89	6.00E+02	1.20E+04	1.21E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	50		0.00E+00
1	78	30	Zr-89	2.00E+03	4.00E+04	7.84E+01	1.97E+02	9.02E+00	1.81E+01	2.99E+01	5.95E+01	9.95E+01	100	4.45E-04	3.50E-01
1	78	30	In-111	6.00E+04	1.20E+06	6.79E+01	9.30E+01	2.57E-01	9.59E-01	1.96E+00	4.82E+00	7.77E+00	50	6.95E-20	5.93E-16
1	78	30	In-111	6.00E+03	0.00E+00	6.79E+01	9.30E+01	2.57E-01	9.59E-01	1.96E+00	4.82E+00	7.77E+00	50		0.00E+00
1	78	30	I-123	5.00E+03	7.00E+05	1.30E+01	4.80E+01	6.67E-02	4.42E-01	1.12E+00	1.11E+01	2.71E+01	50	2.92E-06	1.00E-02
1	78	30	I-124	4.00E+02	4.00E+03	1.00E+02	1.91E+02	7.20E+00	1.95E+01	3.05E+01	7.65E+01	1.24E+02	100	3.29E-03	2.49E-01
1	78	30	I-125	3.70E+01	7.40E+02	1.44E+03	3.70E+01	2.11E+02	3.92E-02	6.23E-02	1.24E-01	1.93E-01	50	1.00E-100	2.74E-100
1	78	30	I-131	4.00E+03	8.00E+04	1.90E+02	6.70E+01	2.74E+00	5.59E+00	9.93E+00	2.59E+01	4.52E+01	50	4.86E-04	2.02E-01
1	78	30	Xe-133	1.11E+03	2.22E+04	1.26E+02	1.80E+01	3.79E-02	9.82E-02	4.00E-01	1.35E+00	2.29E+00	50	3.15E-66	1.20E-64
1	78	30	Sr-133	1.80E+04	4.00E+05	4.87E+01	1.90E+01	8.78E-02	2.04E-01	4.32E-01	1.67E+00	1.70E+01	50	3.02E-09	2.28E-06
1	78	30	Hg-196	8.00E+03	1.60E+05	2.86E+01	6.00E+00	5.69E+00	2.88E+01	3.93E+01	8.34E+01	1.26E+02	100	4.02E-03	3.91E-01
1	78	30	Er-169	3.70E+01	7.40E+02	2.23E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	50		0.00E+00
1	78	30	Lu-177	8.50E+04	1.70E+06	1.81E+02	7.00E+00	9.42E-01	1.19E+00	2.11E+00	4.70E+00	8.46E+00	50	1.98E-18	2.21E-15
1	78	30	Rb-186	8.14E+02	1.63E+05	9.06E+01	4.00E+00	2.86E-01	5.36E-01	9.18E-01	9.97E+00	3.26E+01	50	2.76E-05	1.19E-03
1	78	30	Rb-188	4.07E+04	8.14E+05	1.70E+01	1.10E+01	2.54E+00	9.98E+00	2.17E+01	5.66E+01	9.69E+01	100	8.02E-04	7.18E-01
1	78	30	Tl-201	1.20E+06	3.00E+08	6.02E+00	2.50E+01	2.34E-01	5.35E-01	9.05E-01	1.80E+00	3.70E+00	50	2.76E-66	2.09E-60
1	78	30	Tl-201	1.20E+03	2.40E+04	7.31E+01	2.50E+01	2.58E-01	5.23E-01	8.87E-01	1.94E+00	3.10E+00	50	4.10E-49	2.17E-47
TOTAAL ISOTOPEN															
1	78	30	Ra-223	1.50E+02	2.25E+04	2.74E+02	2.90E+01	6.00E-01	1.92E+00	4.22E+00	1.22E+01	2.38E+01	50	4.98E-07	3.25E-05
1	78	30	Ac-225	2.00E+01	1.00E+03	2.40E+02	6.00E+00	6.98E-02	4.59E-01	1.21E+00	9.20E+00	2.21E+01	50	1.63E-07	9.79E-06
TOTAAL ALPHA'S															
1	78	30	Co-60	2.00E+04	6.00E+04	6.91E+03	0.00E+00								
1	78	30	Mo-99	1.20E+08	2.00E+07	6.60E+01	2.50E+01	5.83E+00	1.37E+01	2.34E+01	4.68E+01	6.95E+01			
TOTAAL GENERATOREN															
1	78	30	Co-57	1.48E+03	2.96E+03	6.50E+03	2.40E+01	2.98E-01	5.33E-01	8.50E-01	2.39E+00	2.40E+01			
1	78	30	Sr-90	7.40E+01	1.48E+02	2.55E+05	6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	78	30	Y-90	7.40E+01	1.48E+02	6.40E+01	2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	78	30	Ba-133	7.40E+01	1.48E+02	9.41E+04	9.20E+01	8.19E-01	2.84E+00	5.65E+00	1.27E+01	1.99E+01			
1	78	30	Co-137	7.40E+01	1.48E+02	2.93E+05	6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
1	78	30	Eu-152	3.70E+02	7.40E+02	1.17E+05	1.89E+02	9.52E+00	2.15E+01	3.67E+01	7.51E+01	1.14E+02			
TOTAAL CALIBRATE BRONNEN															

10% Hooftelheid naar veld

STAP 07 VERZENDING GOEDEREN

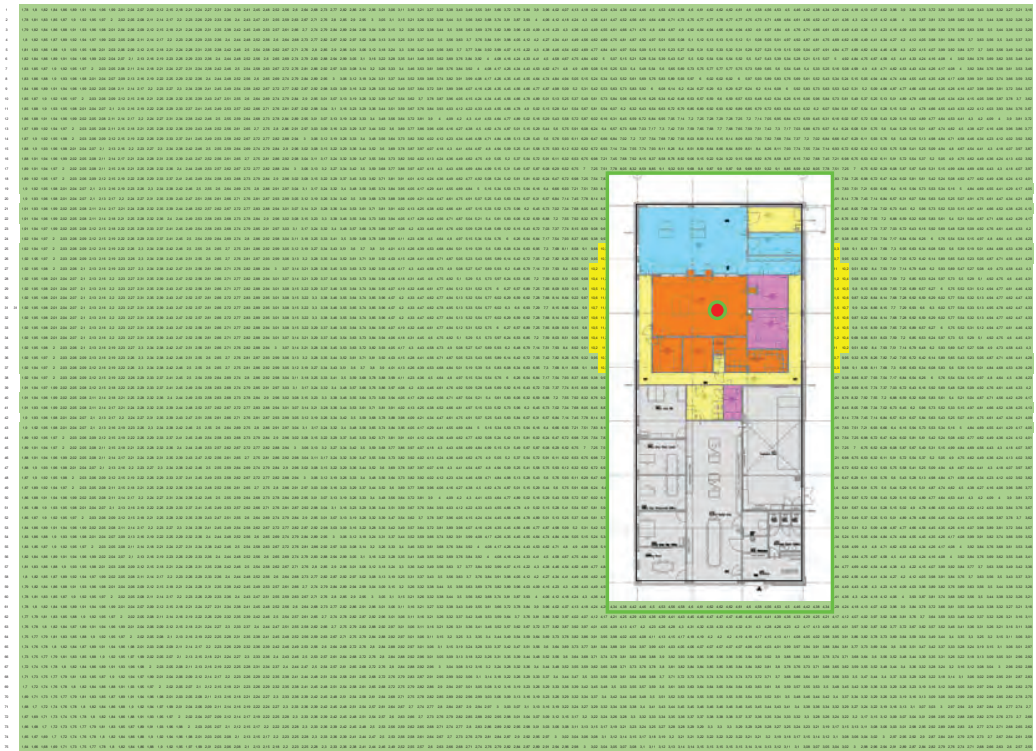


- Terrein grens
- 43 uSvJ
- ONDER SCHEDELS NIEUW
- BOVEN SCHEDELS NIEUW
- OPPER NIEUW

Duur [h]	00:15
Dosis $\mu\text{Sv/h}$ @1m	432

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscherming [mm Pb]	Transmissie e-fit []	$\mu\text{Sv/h}$ @1m	
1	71	27	RAS												1,73E+03	
1	71	27	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00	
1	71	27	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01	15	1,02E-01	1,39E+01	
1	71	27	F-18	2,00E+05	1,00E+06	1,50E+00	1,70E+02	4,50E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01	39,5	1,06E-03	2,39E+02	
1	71	27	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00	
1	71	27	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00	
1	71	27	Co-61	8,14E+01	1,63E+03	6,60E+02	6,00E+00	1,50E+00	3,74E+00	6,07E+00	1,19E+01	1,75E+01	15	2,75E-03	2,69E+02	
1	71	27	Fe-69	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02	15	4,92E-01	6,30E+01	
1	71	27	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,40E+01	6,03E+01	39,5	7,11E-03	8,02E+00	
1	71	27	Ga-67	5,00E+02	1,00E+04	7,83E-01	2,80E+01	8,61E-01	2,23E+00	4,80E+00	1,39E+01	3,40E+01	15	8,82E-03	2,47E+00	
1	71	27	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01	39,5	6,23E-03	7,38E+01	
1	71	27	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E-01	2,22E+00	4,32E+00	1,13E+01	2,02E+01	15	3,86E-03	2,94E-01	
1	71	27	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00	
1	71	27	Zr-89	2,00E+03	4,00E+04	7,84E-01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	9,95E+01	39,5	4,74E-02	3,73E+02	
1	71	27	Is-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E-01	9,59E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	1,90E-01	
1	71	27	Is-111	6,00E+03	0,00E+00	0,00E+00	6,79E+01	9,30E+01	2,57E-01	9,59E-01	1,96E+00	4,82E+00	7,77E+00	15	1,62E-06	0,00E+00
1	71	27	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E-02	4,42E-01	1,12E+00	1,11E+01	2,71E+01	15	5,70E-03	2,02E+02	
1	71	27	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,59E+01	3,05E+01	7,69E+01	1,24E+02	39,5	6,37E-02	4,87E+01	
1	71	27	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,90E-02	6,23E-02	1,24E+01	1,93E-01	15	1,00E+00	2,74E-09	
1	71	27	I-131	4,00E+03	8,00E+04	1,50E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01	15	4,81E-02	2,59E+02	
1	71	27	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E-02	9,82E-02	4,00E-01	1,35E+00	2,20E+00	15	2,24E-20	8,03E-18	
1	71	27	Sr-133	1,80E+04	4,00E+05	4,87E-01	1,90E+01	8,70E-02	2,04E-01	4,32E-01	1,67E+00	1,70E+01	15	1,48E-03	1,11E+01	
1	71	27	Hg-196	8,00E+03	1,60E+05	2,86E+01	6,00E+00	5,69E+00	2,80E+01	3,93E+01	8,34E+01	1,20E+02	39,5	9,00E-02	9,00E+01	
1	71	27	Es-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	15	0,00E+00	0,00E+00	
1	71	27	Lu-177	8,50E+04	1,70E+06	1,81E+02	7,00E+00	9,42E-01	1,19E+00	2,11E+00	4,70E+00	8,46E+00	15	4,80E-06	5,71E-02	
1	71	27	Rb-186	8,14E+02	1,63E+05	9,06E-01	4,00E+00	2,86E-01	5,36E-01	9,18E-01	9,97E+00	3,20E+01	15	6,00E-03	2,41E+00	
1	71	27	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01	39,5	3,09E-02	2,77E+02	
1	71	27	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E-01	5,20E-01	8,87E-01	1,94E+00	3,10E+00	15	3,05E-15	1,61E-12	
TOTAAL ISOTOPEN																
1	71	27	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01	15	5,74E-03	3,74E+00	
1	71	27	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E-02	4,59E-01	1,21E+00	9,20E+00	2,21E+01	15	3,97E-03	2,14E+02	
TOTAAL ALPHA'S																
1	71	27	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00									
1	71	27	Mo-99	1,20E+08	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01				
TOTAAL GENERATOREN																
1	71	27	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E-01	5,33E-01	8,50E-01	2,39E+00	2,40E+01				
1	71	27	Se-60	7,40E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00				
1	71	27	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00				
1	71	27	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E-01	2,84E+00	5,65E+00	1,27E+01	1,99E+01				
1	71	27	Co-137	7,40E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00				
1	71	27	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02				
TOTAAL CALIBRATIE BRONNEN																

STAP 08 OPSLAG GENERATOREN



Duur [h]	8760:00
Dosis $\mu\text{Sv/h}$ @1m	139

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher- ming [mm Pb]	Transmis- sie- fit [-]	$\mu\text{Sv/h}$ @1m
1	73	31	RAS												1,45E+00
1	73	31	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	73	31	F-18	2,00E+05	1,00E+06	1,50E+00	1,70E+02	4,95E+00	9,48E+00	1,51E+01	2,89E+01	4,25E+01			
1	73	31	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Co-61	8,14E+01	1,63E+03	6,65E+02	6,00E+00	1,92E+00	3,74E+00	6,07E+00	1,19E+01	1,79E+01			
1	73	31	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02			
1	73	31	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,49E+01	6,03E+01			
1	73	31	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E+01	2,23E+00	4,80E+00	1,39E+01	3,40E+01			
1	73	31	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01			
1	73	31	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E+01	2,22E+00	4,32E+00	1,13E+01	2,02E+01			
1	73	31	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,95E+01	9,95E+01			
1	73	31	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E+01	9,59E+01	1,96E+00	4,82E+00	7,77E+00			
1	73	31	In-111	6,00E+03	0,00E+00	0,00E+00	6,79E+01	9,30E+01	2,57E+01	9,59E+01	1,96E+00	4,82E+00			
1	73	31	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E+02	4,42E+01	1,12E+00	1,11E+01	2,71E+01			
1	73	31	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,96E+01	3,05E+01	7,65E+01	1,24E+02			
1	73	31	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,92E+02	6,23E+02	1,24E+01	1,93E+01			
1	73	31	I-131	4,00E+03	8,00E+04	1,90E+02	6,70E+01	2,74E+00	5,59E+00	9,93E+00	2,59E+01	4,53E+01			
1	73	31	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E+02	9,82E+02	4,00E+01	1,35E+00	2,20E+00			
1	73	31	Sr-133	1,80E+04	4,00E+05	4,87E+01	1,90E+01	8,78E+02	2,04E+01	4,32E+01	1,67E+00	1,70E+01			
1	73	31	Hg-196	8,00E+03	1,60E+05	2,86E+01	6,00E+00	5,69E+00	2,08E+01	3,93E+01	8,34E+01	1,20E+02			
1	73	31	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Lu-177	8,50E+04	1,70E+06	1,61E+02	7,00E+00	9,42E+01	1,19E+00	2,11E+00	4,70E+00	8,46E+00			
1	73	31	Rb-186	8,14E+02	1,63E+05	9,06E+01	4,00E+00	2,86E+01	5,36E+01	9,18E+01	9,97E+00	3,20E+01			
1	73	31	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,98E+00	2,17E+01	5,66E+01	9,69E+01			
1	73	31	Tl-201	1,20E+03	3,00E+04	6,02E+00	2,50E+01	2,34E+01	5,33E+01	9,95E+01	1,80E+00	2,70E+00			
1	73	31	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,50E+01	2,58E+01	5,23E+01	8,87E+01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	73	31	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E-01	1,50E+00	4,22E+00	1,22E+01	2,38E+01			
1	73	31	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,98E+02	4,59E+01	1,21E+00	9,20E+00	2,21E+01			
TOTAAL ALPHA'S															
1	73	31	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	73	31	Mo-99	1,20E+06	2,00E+07	6,00E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01	100	4,82451E-05	1,45E+00
TOTAAL GENERATOREN															
1	73	31	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E+01	5,33E+01	8,50E+01	2,39E+00	2,40E+01			
1	73	31	Se-69	7,40E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E+01	2,84E+00	5,65E+00	1,27E+01	1,99E+01			
1	73	31	Ca-137	7,40E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	73	31	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02			
TOTAAL CALIBRATIE BRONNEN															

Generatoren blijven niet in de apotheek, maar worden omgeuld



- Terrein grens
- 0 uSv/l
- ONDER TOEGANG
- BOVEN TOEGANG
- OPPER VLIET

Duur [h]	8760:00
Dosis $\mu\text{Sv/h}$ @1m	1

STEP	X	Y	ISOTOOP	Max. MBq op enig tijdstip	Max. MBq per jaar	Half life [h]	OTTO $\mu\text{Sv/h}$ per GBq @1m	HVL 2	QVL 5	TVL 10	CVL 100	MVL 1000	Afscher- ming [mm Pb]	Transmis- sie- e-fit [-]	$\mu\text{Sv/h}$ @1m
1	72	33	RAS												2,23E-04
1	72	33	H-3	3,70E+01	7,40E+02	1,08E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	72	33	C-11	3,70E+01	7,40E+02	3,40E-01	1,85E+02	4,90E+00	9,40E+00	1,51E+01	2,89E+01	4,20E+01			
1	72	33	F-18	2,00E+05	1,00E+06	1,30E+00	1,70E+02	4,50E+00	9,40E+00	1,51E+01	2,89E+01	4,20E+01			
1	72	33	P-32	2,00E+02	2,00E+03	3,43E+02	1,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	72	33	B-35	2,00E+02	7,40E+02	2,10E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	72	33	Co-51	8,14E+01	1,63E+03	6,60E+02	6,00E+00	1,90E+00	3,74E+00	6,07E+00	1,19E+01	1,70E+01			
1	72	33	Fe-59	3,70E+01	7,40E+02	1,07E+03	1,73E+02	1,47E+01	2,73E+01	4,31E+01	6,09E+01	1,18E+02			
1	72	33	Co-64	2,00E+03	4,00E+04	1,27E+01	3,10E+01	5,11E+00	9,81E+00	1,60E+01	3,40E+01	6,03E+01			
1	72	33	Ga-67	5,00E+02	1,00E+04	7,83E+01	2,80E+01	8,61E+01	2,25E+00	4,80E+00	1,39E+01	8,40E+01			
1	72	33	Ga-68	2,00E+04	6,00E+04	1,13E+00	1,97E+02	5,12E+00	9,84E+00	1,60E+01	3,38E+01	6,17E+01			
1	72	33	Se-75	3,70E+01	7,40E+02	2,86E+03	7,10E+01	9,95E+01	2,20E+00	4,32E+00	1,13E+01	2,03E+01			
1	72	33	Se-89	6,00E+02	1,20E+04	1,21E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	72	33	Zr-89	2,00E+03	4,00E+04	7,84E+01	1,97E+02	9,02E+00	1,81E+01	2,99E+01	5,90E+01	8,95E+01			
1	72	33	In-111	6,00E+04	1,20E+06	6,79E+01	9,30E+01	2,57E+01	9,50E+01	1,96E+00	4,82E+00	7,77E+00			
1	72	33	In-111	6,00E+03	0,00E+00	0,00E+00	6,79E+01	9,30E+01	2,57E+01	9,50E+01	1,96E+00	4,82E+00	7,77E+00		
1	72	33	I-123	5,00E+03	7,00E+05	1,30E+01	4,80E+01	6,67E+02	4,42E+01	1,12E+00	1,11E+01	2,71E+01			
1	72	33	I-124	4,00E+02	4,00E+03	1,00E+02	1,91E+02	7,20E+00	1,90E+01	3,00E+01	7,60E+01	1,24E+02			
1	72	33	I-125	3,70E+01	7,40E+02	1,44E+03	3,70E+01	2,11E+02	3,90E+02	6,20E+02	1,24E+01	1,93E+01			
1	72	33	I-131	4,00E+03	8,00E+04	1,90E+02	6,70E+01	2,74E+00	5,50E+00	6,90E+00	2,50E+01	4,53E+01			
1	72	33	Xe-133	1,11E+03	2,22E+04	1,26E+02	1,80E+01	3,79E+02	9,82E+02	4,00E+01	1,35E+00	2,20E+00			
1	72	33	Sr-133	1,80E+04	4,00E+05	4,87E+01	1,90E+01	8,70E+02	2,04E+01	4,32E+01	1,67E+00	1,70E+01			
1	72	33	Hg-196	8,00E+03	1,60E+05	2,86E+01	6,00E+00	5,60E+00	2,80E+01	3,90E+01	8,34E+01	1,20E+02			
1	72	33	Er-169	3,70E+01	7,40E+02	2,23E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00			
1	72	33	Lu-177	8,50E+04	1,70E+06	1,81E+02	7,00E+00	9,42E+01	1,10E+00	2,11E+00	4,70E+00	8,40E+00			
1	72	33	Rb-186	8,14E+02	1,63E+05	9,00E+01	4,00E+00	2,80E+01	5,30E+01	9,18E+01	9,97E+00	3,20E+01			
1	72	33	Rb-188	4,07E+04	8,14E+05	1,70E+01	1,10E+01	2,54E+00	9,90E+00	2,17E+01	5,60E+01	6,60E+01			
1	72	33	Tl-201	1,20E+03	2,40E+04	7,31E+01	2,20E+01	2,58E+01	5,20E+01	8,87E+01	1,94E+00	3,10E+00			
TOTAAL ISOTOPEN															
1	72	33	Ra-223	1,50E+02	2,25E+04	2,74E+02	2,90E+01	6,00E+01	1,50E+00	4,22E+00	1,22E+01	2,38E+01			
1	72	33	Ac-225	2,00E+01	1,00E+03	2,40E+02	6,00E+00	6,90E+02	4,50E+01	1,21E+00	9,20E+00	2,21E+01			
TOTAAL ALPHA'S															
1	72	33	Co-68	2,00E+04	6,00E+04	6,91E+03	0,00E+00								
1	72	33	Mo-99	1,20E+06	2,00E+07	6,60E+01	2,50E+01	5,83E+00	1,37E+01	2,34E+01	4,68E+01	6,95E+01			
TOTAAL GENERATOREN															
1	72	33	Co-57	1,48E+03	2,96E+03	6,50E+03	2,40E+01	2,98E+01	5,33E+01	8,50E+01	2,39E+00	2,40E+01	56	1,00E-07	3,55E+06
1	72	33	Se-69	7,40E+01	1,48E+02	2,55E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	6,00E+00
1	72	33	Y-90	7,40E+01	1,48E+02	6,40E+01	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	0,00E+00
1	72	33	Ba-133	7,40E+01	1,48E+02	9,41E+04	9,20E+01	8,19E+01	2,84E+00	5,60E+00	1,27E+01	1,99E+01	56	3,61E+00	2,40E+08
1	72	33	Ca-137	7,40E+01	1,48E+02	2,93E+05	6,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	56	0,00E+00	0,00E+00
1	72	33	Eu-152	3,70E+02	7,40E+02	1,17E+05	1,89E+02	9,52E+00	2,15E+01	3,67E+01	7,51E+01	1,14E+02	56	3,14E+02	2,00E+04
TOTAAL CALIBRATE BRONNEN															

50% Aantal aanwezige bronnen