## Tc 99 Beta supression tests

Shielding tests with aluminum foil and lead

| material | layers | Diameter cm | area $cm^2$ | mass g | shielding $mg/cm^2$ |
|---|---|---|---|---|---|
| Al | 1 | 2.1 | 3.46 | 0.016 | 4.477 |
| Al | 2 | 2.1 | 3.46 | 0.031 | 8.955 |
| Al | 3 | 2.1 | 3.46 | 0.047 | 13.432 |
| Pb | 1 | 2.1 | 3.46 | 6.427 | 1856.522 |

99Tc = 0.294 MeV

10 minute count intervals of Tc99 with shielding

| Tc99 | | shielding | counts | supression | layers | |
|---|---|---|---|---|---|---|
| | 1 | none | 1325.17 | 0 | 0 | |
| | 2 | 1 Al | 859.68 | 35.1% | 1 | 65% |
| | 3 | 2 Al | 623.56 | 52.9% | 2 | 73% |
| | 4 | 3 Al | 411.9 | 68.9% | 3 | 66% |
| | 5 | 1 Pb | 1.29 | 99.9% | 1 | |

| Tc99 Bq | cert. dpm | measured cpm | eff |
|---|---|---|---|
| 102.86 | 6171.6 | 2270.6 | 37% |
| 96.88 | 5812.8 | 2183.2 | 38% |
| 97.4 | 5844 | 2241.5 | 38% |
| 97.65 | 5859 | 2241.1 | 38% |
| 103.93 | 6235.8 | 2337.7 | 37% |

