

Persistence of Pollutants

The half-life of something is how long it takes for it to lose half its value.

To find the amount of the material for any time you can use the exponential form of the equation:

$$A = A_0(1/2)^{t/T}$$

Where A is the amount, A_0 is the starting amount, t is the time and T is the half life.

Drug	Soil Half Life (days)	% after 1 week	% after 1 month	% after 1 year
2-4 D	10			
Atrazine	60			
Chlordane	350			
Chlorpyrifos (Dursban)	30			
Glyphosate (Roundup)	47			
Permethrin (Raid)	30			
Endron	4300			
DDT	2000			

Source: OSU Extension

Material	Half Life	% after 1 week	% after 1 year	% after 1000 years
Cesium-137	30 years			
Plutonium-239	24,390years			
Iodine-131	8 days			
Carbon-14	5730 years			
Radon-222	4 days			
Uranium-235	713,000,000years			
Strontium-90	29 years			
Radium-226	1,622 years			