

Good Trash, Bad Trash, and Why Should We Care

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Musings about CBN ("Chemical, Biological, Nuclear") problems and interactions

Iodine-129 (Or, more accurately; "129I") is a radioisotope of iodine.

What is a "Radioisotope"? It is an unstable nucleus of Iodine.

What is a "Radionucleide"?

Radionucleide may also be called Radioisotopes.

(*Note: If you just want the "bottom line", it's at the very end of this paper.)

There are both radioactive and non-radioactive isotopes of iodine.

Iodine-129 and Iodine-131 occur naturally in the environment. They are not, in their naturally occurring state, exceptionally dangerous to humans. There are also other isotopes of iodine.

Two are I-123 and I-124. These have become valuable to medicine. They are not a problem to humans, as they have rather brief half-lives before decaying.

Iodine-129 and iodine-131 (the radioactive ones, not to be confused with the natural ones) are created during fission of uranium in nuclear reactors (nuclear power plants, nuclear vessels or nuclear bombs). When created by nuclear bombs, the quantity of radioactive iodine is so massive that the radioactive isotopes are extremely deadly. The human thyroid collects the radioactive Iodine where it stays until you die.

Actually, the human thyroid collects any Iodine isotopes, it just can't tell the difference between the good stuff and the bad stuff. Death from radioactive poisoning is usually a very short, gruesome, process. Unless it becomes a longer, gruesome, process. In the Army, our medical units had supplies of "good iodine" (in the form of Potassium Iodine tablets) in stock in case the troops were exposed to a radioactive environment. By taking the Potassium Iodine tabs the thyroid would soak up the good iodine, leaving no space for the radioactive iodine. One step to help you stay alive after a nuclear event.

Radioactive iodine isotopes have the same properties as stable iodine.

Radioactive iodine isotopes decay with time. Usually lots of time. I-129 decays in more than a million years, I-131 decays in a couple of weeks. Give or take.

Radioactive Iodine-129 and iodine-131 are products of the fission process. These isotopes form inside the rods as fission takes place. Massive amounts are also produced as a result of any nuclear explosion.

By way of mention, Strontium 90 (SR-90) is another product of nuclear explosion and does not occur naturally in our environment. It has a half-life of about 30 years. Even so, the quantities seem to be nearly negligible concerning human health.

SR-90 is also produced minimally by normal nuclear power plant operations but is nearly undetectable with the best equipment. Strontium 90 when taken in from a nuclear explosion is identified by the human body as being mere calcium. It settles in the same places as calcium does; bones and teeth. Not, however, in quantities considerably more concentrated than medical x-ray examinations. Strontium 90 is also present in our environment from previous above ground nuclear bomb explosions.

(Now to get to the part of this subject that may concern the residents of Utah, among others:)

When used nuclear fuel rods are taken from their core environment, radioactive Iodines-129 and 131 do escape into the earth's atmosphere. In the past, spent nuclear rods were processed with acids, which process released the radioactive iodines-129 and 131 into our atmosphere. This acid-processing phase was used to recover certain other valuable materials that we really don't care about in this discussion. Spent rods are supposedly no longer processed because of legitimate concerns regarding the release of I-129 and I-131 during the processing.

Spent rods are now supposedly (supposed to be) stored "as-is", avoiding the release of Radioactive I-129 & 131.

When spent nuclear fuel rods are stored, the short-lived iodine-131 they contain decays within a few weeks. Unfortunately, the Iodine-129 remains lurking, spending its life over the space of something like 16-million years, ...give or take. Preventing deadly I-129 from leaking into the atmosphere is a serious and difficult process requiring eternal monitoring of the containment system and area security.

For years now, ever since nuclear submarines were built, their spent rods have been stored in Idaho. Unmarked tractor-trailer rigs have brought them west for years. At least one time they had a nondescript van with darkened windows following. You have never noticed these shipments simply because they are not announced beforehand. Nor, by the way, afterward unless necessary for some reason.

There is a company in Utah, "Energy Solutions", that wants permission to store spent nuclear rods from overseas in our western desert. These rods are the same type of rods which are stored in Idaho and they have the same dangerous radioisotope; radioactive Iodine-129.

When Iodine changes forms it goes directly from a solid to a gaseous state that of course is released into the air. It makes the sudden change to its gaseous state somewhere under 300-degrees F.

Therefore, to any terrorist, or enemy combatant country, those radioactive Iodine-129 spent-rod repositories would be prime targets after major cities. Not only would the radioactive Iodine from nuclear missiles be spread all over North America, the massive boost gained from the gasification of radioactive I-129 from all those spent rods being explosively processed in temperatures somewhat higher than 300-degrees Fahrenheit would become a monster the citizens downwind from the explosion could never deal with. Color everyone dead. Also color all the topsoil dead wherever the radioactive I-129 happened to fall, including the waterways. Color the continent dead.

But now for the only good news; what you can do to prepare against radioactive iodine poison.

Good iodine in the form of Potassium Iodide (KI) or Potassium Iodate (KI03) can saturate the body and thyroid with good iodine, thereby preventing radioactive iodine from being taken into the thyroid. Both types (KI and KI03) will accomplish this benefit. There are, however, significant preferences between the two: KI is not easy to take because of the taste. It also has a short shelf life so preservatives must be added. KI03 has no adverse taste therefore even children can easily take it. It is available at very reasonable cost and has an exceptionally long shelf life when unopened. Of course, don't open it until a nuclear event threatens your health.

"Iodized Salt" cannot do the same thing for nuclear fallout problems because it is impossible to saturate the thyroid with good iodine from any dietary sources including iodized table salt.

Iodized table salt is, however, extremely valuable in the prevention of iodine deficiency and should be used regularly with food. So-called "Sea Salt" has only negligible amounts of iodine and is therefore not useful in the prevention of iodine deficiency.

*NOTE: Next Page is the "bottom line" for those who did not want to read the whole paper:

Radioactive Iodine is a deadly product of nuclear events; (bombs or spent reactor rods).

Radioactive Iodine will be absorbed by the thyroid and will kill you in a miserable manner.

You can defeat the radioactive iodine by flooding your thyroid with good iodine before the bad arrives.

The preferred method of flooding your thyroid with good iodine is with Potassium Iodate tablets (K103). K103 is inexpensive, has a very long shelf life, and is available without a prescription.

And, "BTW"; doctors, hospitals nor Homeland Security will have any for you in an emergency. Read that twice, because they won't even have any for their needs!

I got mine from an old retired Marine who runs a decent camping website.
<http://www.campingsurvival.com>.

But you can get yours from a hundred other places for a hundred different prices.

(*Note 21 July 2008*) If anyone thinks this plan for nuclear storage in our west desert is someone's daydream, think again: In just the past week our "Representatives" in D.C. and the University of Utah received massive financial donations from the company wanting legislative permission to store the world's supply of spent rods downwind from us. They claim they can provide "security" for these killers. Anyone who believes any company (or any government, for that matter) can provide "security for millions of years", has been smoking too much of that stuff that grows wild along the ditches. "Follow the cash", is not just an idle thought. "Money Talks, Bullshit Walks!" (Danny DeVito, in "Twins") Be prudent; get your own K103 on hand, protect your family against the future.