

# The Trailing Edge

June 2022

## Survival Rations Taste Test

The quoted parts of this article are from an article published in the November 2012 issue of *The Leading Edge*. While I'm sure most of you have that neatly filed away for instant reference, I've made it easier for you by including it here.

As I started the 2022 Condition Inspection on the *Combat Bearhawk*, I noticed that the water flex packs and survival rations in the survival kit had exceeded their 5 year shelf life. I ordered new replacements, but since I am confident that the water and food don't suddenly go bad 1,825 days after it was packaged, but were perfectly safe at 1,824 days, I decided this would be a good time to use the "expired" supplies to sample exactly what they taste like.

### Sustenance

Throughout any reputable survival course you will be constantly reminded that one of the most important things you need to do to survive until rescue is to stay hydrated. Dehydration severely limits your ability to think straight, not to mention your physical capabilities will be impaired. I remember one of those survival training films teaching that the first thing you should do after reaching the ground (assuming you are not in enemy territory) was to find the can of drinking water in your survival kit, give it the slap test (to make sure it was sealed), and drink it down. The assumption was that you were already somewhat dehydrated, since you probably hadn't had any water since before takeoff for your mission. Getting a drink now gave you the best chance of getting off to a good start.

If you are in a survival situation for any significant length of time you will need to seek out a source of water, but like the Air Force recommends, you should start out with an initial supply. This is not as easy as just filling up a water bottle and putting it in your survival kit. You need to have water that is sterile in a sealed container. Your concern is that while the water is in storage for five years little microbes might multiply and grow to an extent that would make the water unhealthy to drink. While that bottle of Dasani off the Albertson's shelf is perfectly safe to drink right now, leave it sitting around for several years and who knows what might happen.

Therefore, a better solution is to purchase Emergency Drinking Water. Amazon ([www.amazon.com](http://www.amazon.com)) sells 12 125ml (4.2 oz) water flex-packs from Datrex for \$10.10. These flex-packs are sterilized and have an advertised shelf life of five years. Because the packaging is flexible, the flex-packs can be pushed into just about any space, giving them an extremely high packing efficiency. You'll get a lot more water in than you would with Dasani bottles. One word of caution: If these flex-packs are anything like the ones the Air Force packs in its survival kits, the water will taste terrible. It will be sterile and suitable to drink, but it won't taste like a fresh, cold bottle of Dasani. Deal with it. If you're breaking open one of these flex-packs you're already having a bad day and nasty tasting water is the least of your problems. Remember, it's good for you.



### Datrex Water Taste Test

As hinted at above, years ago I had a chance to taste water out of an Air Force survival water flex pack. While it was suitable for consumption, it had a very off-putting metallic taste, which presumably came from the packaging. With that in mind, it was with fear and trepidation that I decided to taste the water from one of the Datrex flex packs.

At the top of the flex pack was a very helpful hint, simply saying "TEAR". Since I saw no reason to cry over spilt water packs, I assumed that was meant to be read as rhyming with "air". There was a tiny little hole near the edge of the pack, which I assumed was there to make it easier to tear at that position. Unfortunately, the packing material was a very stiff and strong plastic, since supposedly you don't want it to burst or tear and get your survival

kit all wet. After a few unsuccessful attempts to tear the packaging, I stepped to the toolbox and snipped the corner off with a pair of scissors. I didn't consider this cheating, as I have a knife in my survival kit that could be used for this purpose.

I took a swig of the water, and was surprisingly nonplussed by the experience. The good news was that it did not have that metallic taste of the Air Force water pack. However, the taste was very flat. After a little thinking, that made perfect sense. When I was in the Boy Scouts, we were taught to purify water by boiling it for some period of time that I don't remember exactly. We were warned that after the water cooled down it would taste "flat" because the boiling had pushed the dissolved air out. This could be addressed by pouring the water back and forth between two containers, which would "aerate" the water by entraining some air, thereby improving its taste. After thinking about this for a while, I put the water from another flex pack into an empty Costco water bottle (4.2 oz in a 16.9 oz bottle) and shook it for a while to aerate the water. When I tasted it, it tasted exactly like the water that was originally in the bottle, which is to say "normal" with no funky tastes. Remember this was after the water had been in the flex pack for over five years.

As stated above, if the water in the flex pack is sterilized to prevent mold and bacteria growth, it would make sense that dissolved air would be driven out to remove any oxygen that might be used for growth.

The taste may be flat, but when you are thirsty in a survival situation, you won't care. In that situation, you'll think it is just fine. I can tell you from personal experience that you'll like the taste a lot better than water treated with iodine tablets.

I cut open the empty flex pack to see how it was constructed. The plastic was very tough and looked like aluminum on the inside. I wonder if this was a layer of aluminum to keep the ultraviolet rays out, just like the aluminum layer on fabric covering that protects the fabric from ultraviolet rays.

## Emergency Rations

While you are in a survival situation, you will definitely need water to survive. You will be able to survive for quite a long time without food, but you're going to want food. Survival rations need to be compact, lightweight, and have a long shelf life. I first considered energy bars, such as Clif Bars, but found out that these are mostly carbohydrate and sugar supplements that are intended to give you a boost after exercise and are not suitable as meal replacements. Additionally, these bars have a lot of water in them with a shelf life measured in months. MREs are bulky and thus would take up too much space in the survival kit. When I was in survival training, we were given a "Food Packet Survival General Purpose," which contained five bars similar to granola bars. They also came in a cool can that you could mount on a stick and use to cook with. Unfortunately, these rations now come in cardboard boxes. Also, as far as I can tell, they are not available for purchase by the general public. The closest alternative I found was the Datrex 3600 Emergency Food Bar (Amazon, \$8.49 for 3600 kcal). I have no idea how these taste. Maybe I should order some more and give them a try. Keep in mind you absolutely must have a source of water to eat these emergency rations. Not only does your body use water to digest food, but these bars are already dried to increase shelf life, so it's going to be like eating crackers—you'll need water just to moisten them enough to swallow.



## Datrex Emergency Rations Taste Test

In my ongoing quest to experience what I would be in for if I found myself in a survival situation, I decided to try one of the recently expired Datrex Emergency Rations. It has been 42 years since I ate the "Food Packet Survival General Purpose" bars in survival training, so I really have no reliable memory of that experience (other than the "chocolate" bar was a big disappointment). For some reason I expected a bar that was so dry and so hard that a hammer and chisel would be required to break off a piece to chew. I expected a bar with so little taste that it made a rice cake seem appetizing. After the experience with the water flex pack, I wondered if I would need tools to open the plastic package.

Much to my surprise, I was able to tear open the plastic outer package without much effort. Inside I found 18 bars individually sealed in plastic, similar to the way Kraft American Cheese Singles are wrapped individually

inside the outer package. This inner wrapping is very important, not only to separate each serving, but to physically hold the bar together.

I opened one bar, and in the process of trying to peel the plastic off several chunks of the bar fell off. Because the bar is exceptionally dry, there is no moisture to help hold it together. The palm shortening barely has enough fat to sort of hold it together.

Tuki and I tasted a bar, and we were pleasantly surprised. My first reaction was that it tasted like a cookie. There is just enough sugar and salt in it to make it palatable. It reminded me of some other dry cookies that I have had. Tuki described it as the taste of a regular Chips Ahoy! cookie (without the chocolate chips) but the texture of a biscotti.

Of course, the bar is dry because the lack of moisture helps to prevent spoilage. Because it is dry, it is very crumbly. Eating one bar created a layer of crumbs across my desk. The instructions say to “chew well” which is needed to re-hydrate the bar. This is why you can drink water without food, but you should never eat food without water. As the bar rehydrates in your mouth it grows in size. The result of this is that it is far more filling than would otherwise be expected for a 2.5x1.75x0.5 inch bar.

The ingredients are ridiculously simple and amazingly pronounceable. The entire list is only six things: wheat flour, palm shortening, cane sugar, water, coconut, and salt. As ingredients are listed from largest amount to smallest amount, notice how far down the list water is.

On land, the package recommended serving is one bar every four hours. Assuming no midnight snacks, that would be about four bars a day. This would only result in 28% of your recommended daily allowance (RDA) of protein, and even less of the other stuff. As a planning rule of thumb in my Boy Scout troop we would plan for 8 ounces of food per meal, which would be 24 ounces per day. Four bars are only 5.6 ounces for a whole day. At 200 calories per bar, that's only 800 calories per day. Clearly these bars are not meant to provide complete nutrition, but mostly to get your stomach to shut up by tricking it into thinking you ate something.

The outer packaging is similar to the water flex packs, being plastic aluminized on the inside. My calipers measure both at the same thickness of 0.0045 inches. Since they come from the same company, they are probably the same plastic. The ration bar package was probably easier to open because the edge was pre-compromised by a small cutout. No such cutout was provided on the water flex pack.

- Russ “Erbman” Erb

---

### **The Trailing Edge - Survival Rations Taste Test follow up**

A few of you shared with me your memories of C-Rations, which were not survival rations, but rather rations for when you were in the field away from a base with a proper kitchen. C-Rats were intended to be used for just a few days at a time, but many servicemen and women would end up surviving on C-Rats for weeks or months at a time. A meal of C-Rats was somewhat similar to making your whole meal by heating up canned food (assuming you had a way to heat the cans). My one or two experiences with C-Rats were during Basic Cadet Training (BCT) at the Air Force Academy in 1979 during field training. The C-Rats we were given were clearly manufactured for the Vietnam War and I seem to remember were past their expiration date, but we were assured that they were still okay. Like a lot of canned food, the taste wasn't great, but was adequate. Some items, like beef and gravy, were okay if warmed but terrible if you had to eat it cold.

The history of the Peanut Butter and Jelly Sandwich (still one of my favorites) can be traced back to 20th century field rations. Prior to WWI peanut butter was popular, as was jelly, but not together. In the field rations, along with the main course was an accessory pack, which included such things as peanut butter, jelly, and crackers. Soldiers started combining the peanut butter and the jelly on the crackers and found it to be a desirable combination.

One responder commented about how in field training the perceived quality of the C-Rats would improve with time. I suspect the real answer was the standard of comparison kept dropping. Much like how at one time I developed a taste for iodine treated water.

To this day, I still carry on my key chain a P-38 can opener that came with one of those C-Rats I ate in 1979. It has always worked as advertised, even when some other fancier can openers didn't work. It is also useful when you need a moderately sharp point to tear some packing tape to open a package.

Forwarded below (with permission) is Gary Aldrich's story about survival water supplies in the Minuteman Missile Launch Capsule in the late 1970s.

**Russell E. Erb**

EAA Chapter 1000 Newsletter Editor and Webmeister (Emeritus)

---

From: Gary Aldrich  
Sent: Friday, June 3, 2022 8:20 AM  
To: Russell E. Erb  
Subject: Re: The Trailing Edge - Survival Rations Taste Test

Another fine piece of test reporting. If memory serves, the “Water-Hammer Slap Test” that we did to our canned water under the floor boards of the Launch Control Center was for the purpose of verifying that the can was not only sealed, but that a vacuum remained from its initial filling procedure. The test was conducted periodically (once a year comes to mind but I could be mistaken) and was governed (naturally) by a SAC technical order and checklist. The test procedure was to hold the can (about the size/shape of a beer can) in the right hand (lefties were not welcome in SAC) and briskly slap one end on the heel of the left hand. If you heard a sharp, high pitched “click” the can passed the test. If you heard a lower, more muffled “slosh” the vacuum was, presumably, gone and the purity of the water was suspect. I never found a can that needed to be rejected so the “slosh” sound was just described to me by a god-like missile combat crew instructor.

The tests were scheduled and driven by the maintenance group to be done on the “night shift” of the normal 36-hour tour of alert. Presumably, there would be less maintenance activities on your launch facilities so you would have time to perform the test in a reasonable period. Crews dreaded getting a call from some super-sergeant in missile maintenance to do the testing. First step was to notify the Wing Command Post and the other 4 LCCs in the squadron that you would be busy and not as responsive to, say, WW III beginning. Then you sought out a 3-foot long flat-bladed screwdriver from its storage location and began removing dozens of screws that secured the floor panels. Of course, the slots in these screws, having been walked on and periodically removed and secured since the mid-1960s were sometimes “wallowed out” (as my dad used to say) making for a long removal procedure. And no, we were not issued a “speed-handle” for this task...probably because it was assumed mere crew-dogs couldn’t figure out how to use one.

The thought occurs to me now, almost 50 years later that it’s possible some crews may not have actually performed the test when directed, preferring instead to document the completion of the task on the alert log and using the time to re-read the porn-stash in the capsule. It’s also quite possible that the phone call to perform the test came from a squadron-mate with a sick sense of humor...much like the storied, “Emergency Escape Shovel Assembly Verification Test”. My first crew assignment was as deputy to a mid-level Captain crew commander. Neither us had any operational experience which was a bit unusual in the day. We were both quite naive so when the super-sergeant’s call came, we did what we were told.

Anyway, carry on with your excellent Bearhawk vignettes....

GLA

---

Continuing our series on survival rations and C-rats, here is a story from Jimmy Doolittle III about his experiences with the successor, MREs.

**Russ**

From: Jimmy Doolittle III  
Sent: Tuesday, June 7, 2022 8:23 AM  
To:  
Subject: Re: The Trailing Edge - Survival Rations Taste Test follow up--MREs toooooo{>}{:>}

Erbman etal

As a sequel to the C-Rats and water can stories I can offer a brief story about dining on MRE----'Meal Ready-to-Eat'

The DoD follow on to C-Rats was a substantial large drab colored plastic package of loooooong shelf life (edible???) 'delights' packed in some sorta polymer that was almost always extremely difficult to get open.

Once opened there were a number of similar but smaller packages, some reasonably tasty and some absolutely dreadful...do recall that the 'marketeers' were hired to invent names for the 'edibles' and they had catchy inviting names even for the most dreadful items.

The little unit I was assigned to in the mid 1980s supported an Infantry Division in Korea (assignments guys knew I liked guns and 4 wheel drive) We were ground FACs (Forward Air Controllers) aka ALOs (Air Liaison Officers) and enlisted ROMADs (Radio Operator/Maintainer and Driver). The ROMAD was an important part of the TACP (Tactical Air Control Party) and provided fire support with an M-16 or M-4 rifle to augment the ball 38 Special the ALO was shooting at the bad guys....

Most importantly, experienced ROMADs could instruct their new guy ALO how to warm (read thaw) MREs on the exhaust manifold of an M151/MK106 jeep/commo vehicle...the commo vehicle with a little 4 banger, drum brakes, and 1000 lbs of radios plus a 1000 pound trailer full of ammo and MREs...if you've never spent a winter in Korea it was like Northern Michigan or Chicago or Dayton except MUCH colder....

The best part of MREs was that there was about a half trash can, a LOT of NON-bio degradable plastic trash left over that we usually burned, creating a lot of toxins{:>}{:>}

Long live MREs...(they will be around even after the cockroaches expire)

Jimmy D3 sends

