

I have updated the existing MRE faq with some supplemental information.

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| Taking back the web one line @ a time |
| |
| The official SnatchSoft website: |
| <http://www.geocities.com/Eureka/Park/3960/> |
| All fonts, all the time! |

NOTICE TO BULK E-MAILERS: Pursuant to US Code,
Title 47, Chapter 5, Subchapter II, p.227, any and all
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\$500 US.... Ahh hell with it! Violators will be shot!
Survivors will be shot again!
The updated MRE faq page By: Joseph Grant (snatchsoft@hotmail.com)

MRE (Meal Ready to Eat) FAQ Version: 1.1

Updated: 17112097.13

Section I - MRE History

Section II - MRE Contents/Components

Section III - Pouch and Heater Construction

Section IV - Shelf Life and Storage/Temperature Chart

Section V - MRE Myths

Section VI - Dietary Considerations/Nutrition Chart

Section VII - Recipes

Section VIII - Suppliers

NEW THIS REV: Heating pouch info, spoon composition, shortcake
recipe, suppliers and MORE!!!

SECTION I - MRE HISTORY

MREs (Meals Ready to Eat) were born on Earth, but grew up on Apollo flights to the moon, in Skylab floating workshops and on every U.S. Space Shuttle flight from Enterprise to Atlantis. In the 1970s retort pouches (the popular name for thermostabilized, laminated food pouches named after the retort cooker) were put to their first real test by the U.S. Space Program. The Program was looking for delicious, easy to prepare, "normal" food that wouldn't increase human stress the way that freeze dried food and "toothpaste tube food" did. More than any other technology, retort pouches have satisfied the Program's needs. And so, over 20 years ago, retort pouches found a home at NASA, where all their unusual characteristics were much appreciated and they have been successfully feeding astronauts in flight and on the moon ever since.

THE HISTORY OF THE MRE

In the 1980s the U.S. military research labs, which had hatched the pouch technology in the first place, took the lead in its use and development. They enabled the U.S. Military to upgrade its entire field ration program to retort pouches, from the earlier, less workable technologies of canning and freeze drying. Over the past 10 years these high tech research labs have continually upgraded the taste and nutritional profile of the meals. Over the past 10 years our military has depended on MREs for its field ration requirements. Tens of millions of MRE "full meals" have been produced and eaten. They have gone to Grenada, to the war on drugs, to fight forest fires in Alaska, and to feed the troops in "Desert Shield" and Desert Storm.

SECTION II - MRE CONTENTS/COMPONENTS

There are 13 basic menus in the typical case of MREs. These menus are:

Menu #1 Menu #2

Pork with rice in barbecue sauce Corned beef hash

Applesauce Freeze-dehydrated fruit 1/

Jelly Jelly

Crackers Crackers

Cocoa beverage powder Oatmeal cookie bar

Sugar-free beverage base Cocoa beverage powder

Hot Sauce Sugar-free beverage base

Accessory packet, B Hot sauce

Spoon Accessory packet, B

Flameless heater Spoon

Flameless heater

Menu #3 Menu #4

Chicken stew Omelet with ham

Wet pack fruit 2/ Potatoes au gratin

Peanut Butter Jelly

Crackers Crackers

Candy 3/ Candy 3/

Beverage base, powdered Oatmeal cookie bar

Hot Sauce Cocoa beverage powder

Accessory packet, A Sugar-free beverage base

Spoon Hot Sauce

Flameless heater Accessory packet, A

Spoon

Flameless heater

Menu #5 Menu #6

Spaghetti with meat and sauce Frankfurters, beef

Pound cake 4/ Potato-sticks

Cheese spread Freeze-dehydrated fruit 1/

Crackers Peanut butter

Candy 3/ Crackers

Cocoa beverage powder Candy 3/

Sugar-free beverage base Cocoa beverage powder

Hot sauce Sugar-free beverage base

Accessory packet, A Hot sauce

Spoon Accessory packet, A

Flameless beater Spoon

Flameless heater

Menu #7 Menu #8

Beef stew Ham slice

Pound cake 4/ Potatoes au gratin

Peanut butter Brownie, chocolate covered

Crackers Cheese spread

Beverage base, powdered Crackers

Hot sauce Cocoa beverage powder

Accessory packet, A Beverage base, powdered

Spoon Hot sauce

Flameless heater Accessory packet, A

Spoon

Flameless heater

Menu #9 Menu #10

Pork chow mein Tuna with noodles

Chow mein noodles Pound cake 4/

Freeze-dehydrated fruit 1/ Jelly

Peanut butter Crackers

Crackers Candy 3/

Cookie, chocolate covered Beverage base, powdered

Beverage base, powdered Hot Sauce

Hot Sauce Accessory packet, A

Accessory packet, A Spoon

Spoon Flameless heater

Flameless heater

Menu #11 Menu #12

Chicken and rice Escalloped potatoes with ham

Cheese spread Applesauce

Crackers Brownie, chocolate covered

Candy 3/ Cheese spread

Cookie, chocolate covered Crackers

Beverage base, powdered Cocoa beverage powder

Hot Sauce Sugar-free beverage base

Accessory packet, A Hot Sauce

Spoon Accessory packet, A

Flameless heater Spoon

Menu #13

Red beans and rice

crackers

Brownie

Coffee

Jello

Accessory packet,

Fork

Spoon

Salt

Pepper

Flameless heater spoon

Flameless heater

1/ At least three of the four different kinds of freeze-dehydrated fruit (fruit mLx, peaches, pears, strawberries) shall be distributed in each shipping container.

2/ Type III, IV, or V of MIL-F-44067.

3/ Each shipping container shall have six menus with candy packed directly into the menu bag, outside of the accessory packet. The candy shall be procured so that three of the six menus contain packages of chocolate disks, two of the six menus contain heat stable chocolate bars, and one of the menus contains a package of fruit tablets.

4/ Types VII, VIII, IX, X, and XI shall be procured in equal quantities and distributed in as uniform a distribution as possible in each shipping container. However, not more than two meal bags in any shipping container shall contain the same type of cake.

SECTION III - POUCH AND HEATER CONSTRUCTION

The big breakthrough was the pouch. Its three special layers allow the food to be sealed and then cooked (opposite from other food

processing methods) and never exposed to the air again until opened. Thus, the food is actually sterilized in the pouch and then blocked from future contamination. The result is the almost unbelievable shelf life and food which retains its natural moisture and juice (i.e. it is not freeze dried or dehydrated). Here Is the breakdown of the breakthrough pouch:

OUTERLAYER: A tough polyester film which provides protection for the middle layer and Is an excellent printing surface.

MIDDLE LAYER: The key to the pouch's shelf stability, aluminum foil, the most effective and economical barrier to moisture, light and oxygen. The result: No refrigeration or freezing will ever be required.

INNER LAYER: Next to the food product is a very special polypropylene film. It Is compatible with the widest variety of foods so that no "canned" or other unwanted taste is added to the food. It also ensures an exceptionally strong heat seal.

There are water activated heaters designed to warm up MREs prior to consumption. Here's a little on their composition and functionality. From MIL-R-44398 (Flameless Ration Heater) :

3.3 DESIGN OF HEATER PAD. The heater pad shall consist of a supercorroding Mg-Fe alloy powder and an electrolyte together with flow and wetting agents dispersed throughout a porous matrix formed from polymeric powders. The magnesium and iron function as anode and cathode, respectively. The electrolyte is activated by the addition of water which initiates a rapid corrosion of the magnesium particles within the matrix. The products of the chemical reaction are heat, magnesium hydroxide, and gaseous hydrogen.

The MRE spoons are made of polystyrene. References: MIL-M-44074 (Meal, Ready To Eat, Individual, Assembly of) and L-F-560 (Fork, Knife, and Spoon, Picnic).

SECTION IV - SHELF LIFE AND STORAGE/TEMPERATURE

CHART MRE SHELF LIFE

A main concern in the development and testing of rations for our armed forces has always been shelf life. An amazing amount of research has been done in the development of the retort pouch and the MRE to determine the exact length of time and the exact

conditions under which it is safe to store the entrees and side dishes. The main thing we have to work with is the shelf life chart (shown below) compiled by the Army's Natick Research labs. This gives a very good overview and summary of all the findings gathered from all the testing of MRE products. However, it leaves many questions unanswered. Here are additional facts and observations that have been gathered about MRE shelf life:

- 1) The Shelf life ratings shown in the chart above were determined by taste panels, panels of "average" people, mostly office personnel at the Natick labs. Their opinions were combined to determine when a particular component or, in this case, the entire MRE ration, was no longer acceptable.
- 2) The Shelf life determinations were made solely on the basis of taste, as it was discovered that acceptable nutritional content and basic product safety would extend way beyond the point where taste degradation would occur. This means that the MRE would be safe and give a high degree of food value long after the official expiration of the products as determined by taste.
- 3) MRE pouches have been tested and redesigned where necessary according to standards much more strict than for commercial food. They must be able to stand up to abuse tests such as obstacle course traversals in field clothing pockets, storage outdoors anywhere in the world, shipping under extremely rough circumstances (such as by half track over rocky terrain), 100% survival of parachute drops, 75% survival of free-fall air drops, severe repetitive vibration (1 hour at 1 G vibration), 7,920 individual pouch drops from 20 inches, and individual pouches being subjected to a static load of 200 lbs for 3 minutes.
- 4) Freezing an MRE retort pouch does not destroy the food inside, but repeated freezing increases the chances that the stretching and stressing of the pouch will cause a break in a layer of the laminated pouch. These pouches are made to withstand 1,000 flexes, but repetitive freezing does increase the failure rate by a small fraction of a percent.

MRE STORAGE LIFE CHART

150
(130)
100 (100) #

75 (76) # #
Months # # #

of 50 (55) # # #

Storage # # # #

25 (22) # # # #

(5) # # # # #

(1) # # # # # #

#

120 110 100 90 80 70 60

Degree F.

BELOW 60 degrees Not enough data yet collected. However, projections are that the 130 months will be surpassed. This chart contains storage life projections for MRE rations from the U.S. Army's Natick Research Laboratories and does not reflect a manufacturer's or vendor's guarantee.

NOTE: Time and temperature have a cumulative effect. For example, storage at 100 degrees for 11 months moved to 70 degrees would lose one half of the 70 degree storage.

SECTION V - MRE MYTHS

Q) Is it true that MREs are laced with Saltpetre and will make me impotent?

A) This is a silly urban myth and should not be perpetuated. If you have any question of this, I will pass your address on to my girlfriend who will attest to the fact that on weekends of MRE meals my habits (wink wink nudge nudge) are not altered in the least. On the other hand MRE meals are chock full of Alum and eating too many will make your head shrink just like in the classic Warner Brothers cartoons.

Q) Will MRE meals constipate me?

A) It depends. MREs are low in moisture content. They do not constipate me, but different folks respond differently. If you maintain your normal fluid intake while consuming MREs you should have no problems. I know of folks that add water to their regular MRE entrees to stretch them a bit and add more moisture. I do not do this but if others like it I say "cool".

SECTION VI - DIETARY CONSIDERATIONS/NUTRITION CHART

(This Area Under Construction)

Vegetarian MREs - I know of only one vegetarian MRE, Red beans and rice, crackers, Brownie, Coffee, Jello.

Kosher MREs - Any information on this would be appreciated.

SECTION VII - RECIPES

Here are a few MRE recipes:

CHEESY HAM & POTATOES 1- 8 oz. Escalloped Potatoes w/ham 1- 5 oz. Potatoes Au Gratin Tobasco Sauce Pepper Combine Escalloped Potatoes w/ham and Potatoes Au Gratin. Heat in microwave safe bowl for 2 minutes stir and heat 1 1/2 minutes longer; over open fire heat in skillet until hot. Serve.

SPAGHETTI MEATBALLS 1- 8 oz. Spaghetti w/meat Sauce 1- 8 oz. Meatballs, Beef & Rice Combine Spaghetti w/meat Sauce and Meatballs Beef & Rice. Heat microwave safe bowl for 2 minutes, stir and continue to heat for 1 1/2 minutes; or heat over open fire in a skillet until hot. Serve.

HAM Omelet w/CHEESE 1 - 6 oz. Omelet w/ham 1-1.5 oz. Cheese Spread Heat Omelet w/ham in microwave safe bowl for 2 minutes; or heat over open fire in skillet until hot. Mix in cheese spread. Add Tobasco, Salt and Pepper for seasoning.

HAM CASSEROLE 1 - 4.5 oz. Ham Slice 1-1.5 oz. Cheese Spread 1 -1.5 oz. Freeze-Dried Pasta Reconstitute pasta in water heat until tender. Cut Ham Slice into chunks heat in microwave safe bowl until hot; or heat in skillet over open fire until hot. Combine Pasta, Ham chunks and Cheese Spread. Add Pepper for seasoning.

CHOCOLATE ICING 1-1.5 oz. Cocoa 1- Non-Dairy Creamer 1 - Sugar Mix Cocoa, Creamer and Sugar. Stir in small amounts of water until desired consistency is achieved. Spread icing over pound cakes crackers or nut cakes.

MOUSSE PUDDING 1-1.5 oz. Cocoa 1 - Non-Dairy Creamer Mix Cocoa and Creamer together. Slowly add water to get desired consistency. Serve.

STRAWBERRY SHORTCAKE Crackers, crumbled as much as you can get them. Creamer Strawberry pack Water Mix to a nice paste, let it sit a few minutes, then eat.

SECTION VIII - MRE SUPPLIERS

Major supplier of MRE's are

Any walk-in Sunnys surplus store
\$6.75 each

Ponderosa Products Eagle, Free Idaho, USA 208/939-1513 \$45/case
of 12 and that includes UPS shipping to you.

Sierra Supply

Major Surplus

Gunshow Note: At a Phoenix, AZ gunshow on 4/22/95, the going price for a case of MREs was \$35.00. These were packed in 1993 and included heaters.

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DONE=====

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