

Characteristics of the BAMISA PORRIDGE and his Recipe

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The BAMiSA porridge is a "**liquefied concentrated porridge**" (LCP), i.e. a porridge of high protein-energy value and low viscosity.

The porridge is made with BAMiSA flour. The flour ingredients are : cereal (pearl millet or maize), two fatty legumes (soy and peanuts), sugar and iodized salt.

Its preparation is specific : "**a lot of flour for a little water**". Indeed, after a quick boil, it becomes very thick. While it is still warm, a local amylase is then added to **liquefy** it.

The "1+2+3" formula sums up its preparation mode :
1 stands for **one** volume of water, **2** stands for **two** volumes of flour
 and **3** stands for **three** pinches of malt.

The large quantity of flour compared to the small amount of water enables the BAMiSA LCP to reach a **concentration** of 30% dry matter, i.e. three to four times more than traditional porridges.

The starch degradation due to the introduction of amylases enables to get rid of the dietary bulk effect of traditional porridges. Liquefaction enables quick and complete consumption of LCPs as well as their easy digestion. This liquefaction process avoids the **disastrous dilution** of thick porridges with water.

The mother can replace the three pinches of malt by a small quantity of her milk or she can wet the spoon with her saliva before mixing the porridge. Milk and saliva are rich in amylases.

The Nutritional Value of BAMiSA porridge

The basics for a BAMiSA porridge are the "1 + 2 + 3" recipe which has a 200 ml volume (about a bowl-full). Its caloric value is about 250 Kcal.

Two BAMiSA porridges provide a ration of 500 Kcal, equivalent to one sachet of RUTF.

Proteins ≥ 4,5 g	Iron 3 mg	Phosphorus 78 mg
Lipids ≥ 3,3 g	Zinc 1,8 mg	Magnesium 33 mg
Carbohydrates 19 g ± 1g	Calcium 30 mg	Copper 17 mg
Caloric value ≥ 125 Kcal		

Nutritional Content expected in 100 ml of porridge

Users of BAMiSA porridge

Young children

- Children over the age of six months, as a supplement to breast-feeding, one BAMiSA porridge contributes to prevent malnutrition.
- As early as four months old, in case of irreversible deficit of maternal milk and also for orphaned children, a BAMiSA porridge a day can be given in complementation of a milk diet.
- BAMiSA flour is to be used until the child is able to have its nutritional needs satisfied by the traditional family food.

Malnourished children

- Children at risk of malnutrition or suffering from moderate malnutrition, or undergoing phase 1 of a severe acute malnutrition treatment need two BAMiSA porridges to be added to their usual food. A mineral-vitamin complementation (CMV) must be associated.

Older children and adults

- Plan 2 to 3 porridges for sick or malnourished adults (chronic illnesses, HIV positivity, surgery).
- One porridge a day may be beneficial to school-aged children, pregnant or breast-feeding women and aged people.

If the consumer prefers a thicker porridge, don't add the malt.

BAMiSA flour can be "enriched" with fruit juice, moringa oleifera leaves, red palm oil, or "fortified" by adding micronutrients.

The BAMiSA Porridge Recipe

The BAMiSA porridge is a Liquefied Concentrated Porridge. It respects three principles :

1° **The Control of the water/flour proportions :**

Mix « 1 volume of flour for 2 volumes of water »,
i.e. for one bowl of porridge : « 60 g of flour and 200 ml of water ».

2° **A brief cooking**

Boil for 1 or 2 minutes until the porridge becomes thick. The cereal and the fatty legumes have been precooked by their preliminary roasting.

3° **The amylasic liquefaction of the porridge**

The " 3 pinches " of malt, mixed gradually into the hot porridge, leads to its liquefaction. The maternal milk or traces of maternal saliva on the spoon, both being rich in amylases, can also cause a quick liquefaction.

The " 1 + 2 + 3 " recipe

1 unit of flour + 2 units of water
+ 3 pinches of malt.

- 1° In a bowl, mix
1 glass of flour and
1 glass of water.
- 2° In a saucepan, boil
the second glass of water.
- 3° Into the boiling water,
pour the mixed flour and water.
- 4° Stir while heating.
And the porridge will become thick.
- 5° Cook a few minutes
over a low heat, while stiring.
- 6° Remove from the fire,
DO NOT ADD WATER.
- 7° To liquefy without diluting
mix 3 pinches of malt
into the hot porridge.
Thanks to the amylase of the malt,
liquefaction is fast.
- 8° Eat immediately ,
or reheat a few moments.
- 8° To enrich with vitamins and minerals,
we advise adding fruit juice, tomatoes, red palm oil,...
or a vitamin/mineral supplement.

Text and drawings appearing on the back of the bags of BAMiSA® flour

The Liquefied Concentrated Porridge can also be prepared directly from its basic ingredients .

See the educational brochure (in French): n° 2 in Document 05h on the website