

MICROGEN BIOPRODUCTS LTD

PULSIFIER®
THE DIFFERENCE IS CLEAR™

**A REVOLUTION IN SAMPLE
PREPARATION FOR
MICROBIOLOGICAL ANALYSIS**



Now included in
ISO: 7218:2007(E)
Microbiology of food
and animal feeding
stuffs

- **Does not “crush” samples therefore reduces bag burst**
- **Less suspended food debris therefore easier pipetting**
- **Efficient process - microbe recovery is equivalent to or better than alternative methods**
- **Faster sample preparation time of 15 seconds for most foods**
- **Faster filtration as a result of cleaner sample**
- **Increases laboratory efficiency**
- **Reduced disruption of food matrix minimises inhibition / interference with PCR, flow cytometry techniques**

Protecting Food and Health

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The Pulsifier® employs a revolutionary new technology for the processing of food samples for microbiological examination. Unlike paddle-type instruments the Pulsifier® beats the outside of the plastic bag containing the food sample at high frequency producing a combination of shock waves and intense stirring which drives the microbes into suspension. Pulsification has been shown in most food types to be less destructive to the sample producing lower concentrations of debris.

The advent of new technologies for the rapid early detection of food borne bacteria has been difficult to perfect using standard laboratory food sample preparation equipment such as blenders and paddle-type instruments. The Pulsifier® offers processed samples that are more compatible with the demands of rapid microbiology methods featuring less food matrix destruction and a cleaner aqueous phase.

The Pulsifier® is now included in ISO:7218:2007(E); Microbiology of food and animal feeding stuffs. ISO: 7218: 2007(E) states that a vibrated mixer (Pulsifier®) has the fastest run time of 0.5 to 1 minute (recent evaluations have shown that there is no increase in bacterial recovery after 15 seconds) and is suitable for most food stuffs, including hard or dry products. ISO:7218:2007(E) also states that peristaltic blender (Stomacher) which has a slower run time of 1 to 3 minutes and may not be suitable for certain foodstuffs such as hard or dry products, as they may puncture the bag. A peristaltic blender (Stomacher) is also shown that they may not be suitable for products which are difficult to homogenize due to texture such as sausages.

The Pulsifier® features:

- a transparent door through which the suspending action can be viewed and which opens out completely to allow thorough cleaning
- a unique locking mechanism that ensures the sample bag is completely sealed to avoid release of aerosols
- a self contained area at the bottom capable of collecting a complete sample volume should any spills or leaks occur
- a programmable LCD control panel featuring run time setting, program setting, a set of standard process times and a pause button.

Figures 1 and 2 demonstrate how little destruction of the food matrix occurs during the pulsification process.



Figure 1. Mushrooms



Figure 2. Meat