

## F-AP Fast Alkaline Phosphatase Test – Results in 45 Seconds<sup>†</sup>

# F-AP Test

Fast Alkaline Phosphatase



### MULTIPLE APPLICATIONS

The **F-AP** test can be used in applications including:

- Routine monitoring of HTST samples
- After breaking a seal
- Verify HTST system or “Vat” pasteurization
- Verify safety of heat-treated waste milk fed to calves to reduce risk of disease transfer

### MULTIPLE PRODUCTS

**NO sample preparation required for:**

- Whole Milk
- 2% Milk
- 1% Milk
- Skim Milk
- Half and Half
- Light Cream
- Liquid Creams [ $< 40\%$  B.F.]

**Centrifugation required for:**

- Chocolate Milk

**Inquire for other types of products.**

### F-AP TEST AT A GLANCE

- One Step Test
- No Reagents or Incubation Required
- Auto Calibration (no manual calculations needed)
- Results in mU/L
- Limit of Detection: 20 mU/L

### PASTEURIZATION VERIFICATION

Alkaline Phosphatase is a natural milk enzyme that is destroyed by conventional pasteurization (161° F / 72°C for 15 seconds). This makes Alkaline Phosphatase an excellent marker to verify destruction of pathogenic microorganisms in HTST pasteurized dairy products.

Charm® **F-AP** test is the fastest available phosphatase method to verify completeness of pasteurization.

The simple one-step procedure requires no reagent preparation\* and delivers results in just 45 seconds<sup>†</sup>.

With a limit of detection of 20 mU/L, well below established US and EU regulatory thresholds of 350 mU/L, **F-AP** provides an early warning indicator of improper pasteurization.

### PMO AND NCIMS APPROVED

As of October 2009, the **F-AP** test is an official approved pasteurization test for milk and dairy products by the US National Conference of Interstate Milk Shippers (NCIMS) under the Pasteurized Milk Ordinance (PMO). **F-AP** is based on the popular NCIMS-approved Charm PasLite test, an ISO/IDF standard method for testing alkaline phosphatase in milk and dairy products (ISO 22160/IDF 209). Using a simplified procedure, **F-AP** provides test results in just 45 seconds<sup>†</sup>.

<sup>†</sup> Creams and chocolate milks require 90 second analysis

\* Chocolate milk requires centrifugation

# F-AP Fast Alkaline Phosphatase Test – Results in 45 Seconds<sup>†</sup>

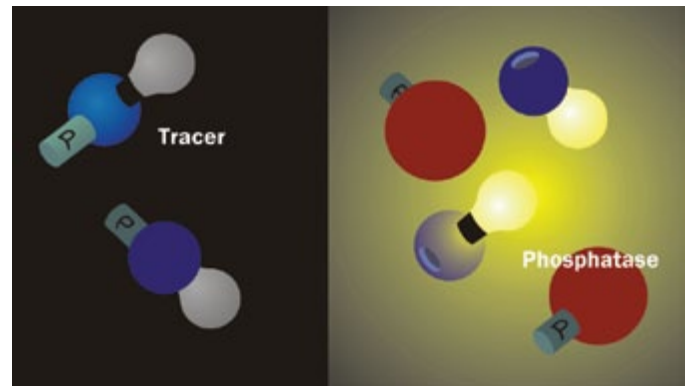
## F-AP TEST PRINCIPLE

**F-AP** employs an enzyme photo-activated substrate (EPAS), which in the presence of alkaline phosphatase emits a light intensity proportional to the enzyme activity. The light is detected and read by the Charm novaLUM<sup>®</sup> luminometer.

## MEETS HACCP REQUIREMENTS

Pasteurization is a Critical Control Point with HACCP. **F-AP** meets and exceeds HACCP requirements by detecting 20 mU/L alkaline phosphatase, well below established US and EU regulatory thresholds of 350 mU/L.

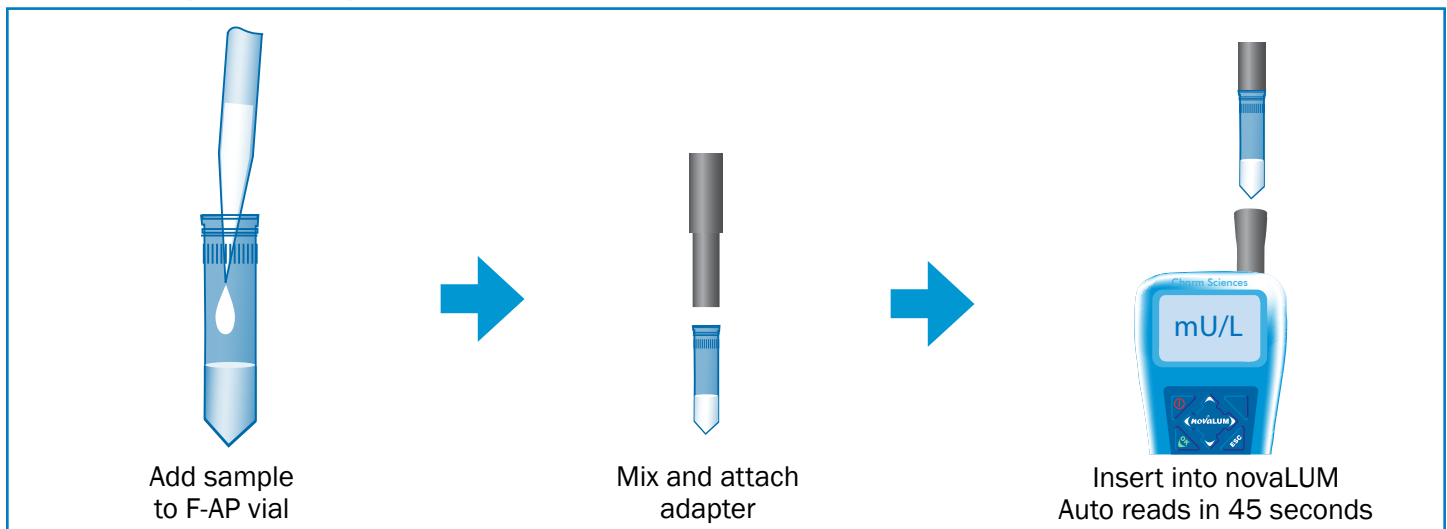
## ENZYME PHOTO-ACTIVATED SUBSTRATE PRINCIPLE



Negative Sample

Positive Sample

## PROCEDURE (SIMPLIFIED)



## REQUIRED EQUIPMENT

- novaLUM (Version 1.04 or higher)
- novaLUM Stand
- Temperature Probe
- 100 µl Pipet
- Microtube Rack

## F-AP KITS

- Available in 25, 100 and 500 test kits
- Kit codes: [PAS-FAP-25K](#), [PAS-FAP-100K](#), [PAS-FAP-500K](#)
- Up to one year refrigerated shelf-life
- Kits include calibration tablets

## Charm Sciences, Inc.

659 Andover Street, Lawrence, MA 01843-1032, USA

Tel: +1.978.687.9200 | Fax: +1.978.687.9216 | Email: [info@charm.com](mailto:info@charm.com) | [www.charm.com](http://www.charm.com)

© Copyright 2010 Charm Sciences, Inc. Charm and novaLUM are registered trademarks of Charm Sciences, Inc. MRK-063-002 0110

