

## 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

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## F-AP TEST PRINCIPLE

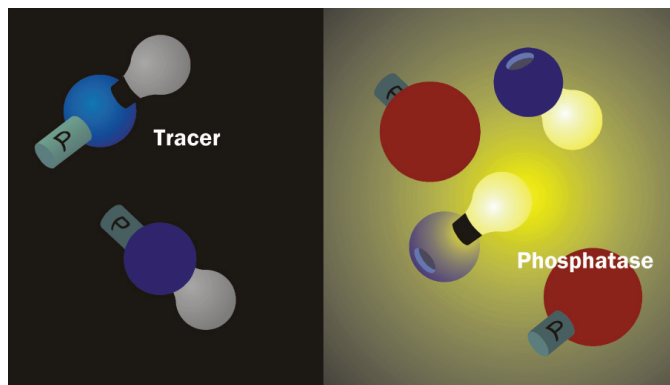
**F-AP** employs an enzyme photo-activated substrate (EPAS), which in the presence of alkaline phosphatase emits a light intensity proportional to the enzyme activity. The light is detected and read by the Charm novaLUM<sup>®</sup> luminometer.

## 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.

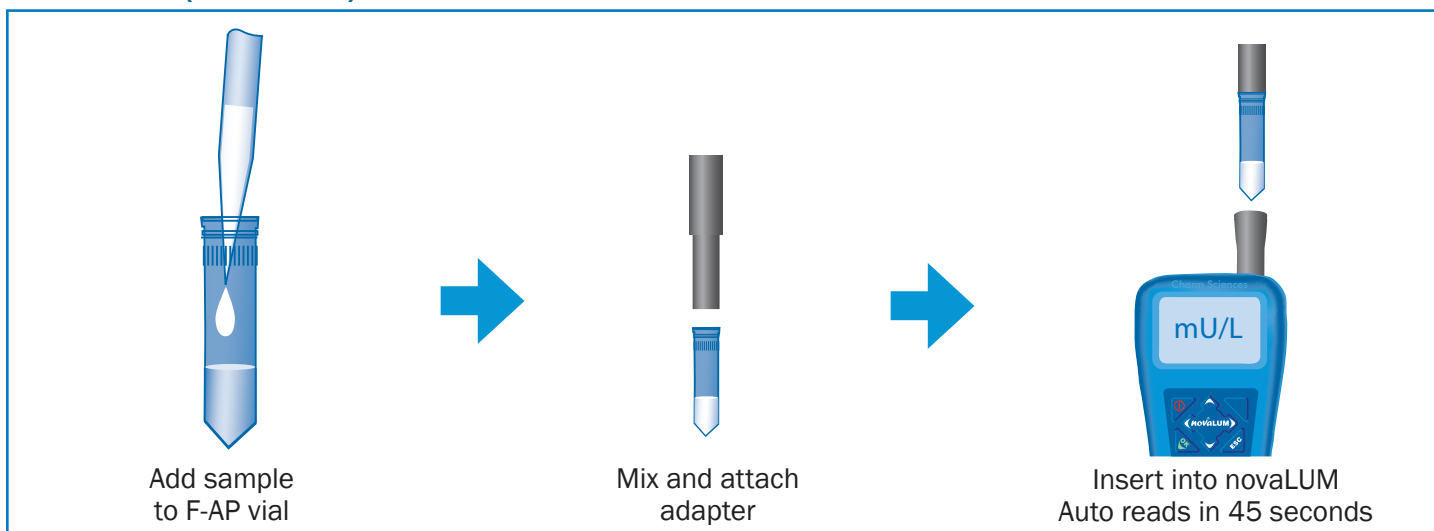
## ENZYME PHOTO-ACTIVATED SUBSTRATE PRINCIPLE



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.

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