

ZymoSnap ALP | Alkaline Phosphatase (ALP) Test

Simple and Reliable Dairy Pasteurization Verification – *in minutes*



ZymoSnap ALP rapidly measures alkaline phosphatase activity in dairy products to verify pasteurization. Clear definitive results avoid delays and additional costs of retesting as seen with other ALP test methods. ZymoSnap has been validated for a variety of milks with various fat content, flavored milks, creams and more.

Benefits

- All-in-one device
- 10-second read time
- Large sample throughput (45+ tests per hour)
- 5-minute assay (37 °C incubation)
- Suitable for milk products such as flavored milks, cream, yogurts, shakes
- For use with EnSURE[®] Touch luminometer



Sensitivity

- Detects below the regulatory limit of 350 mU/L; and even to levels below 100 mU/L
- Clear, reliable results, even at low levels



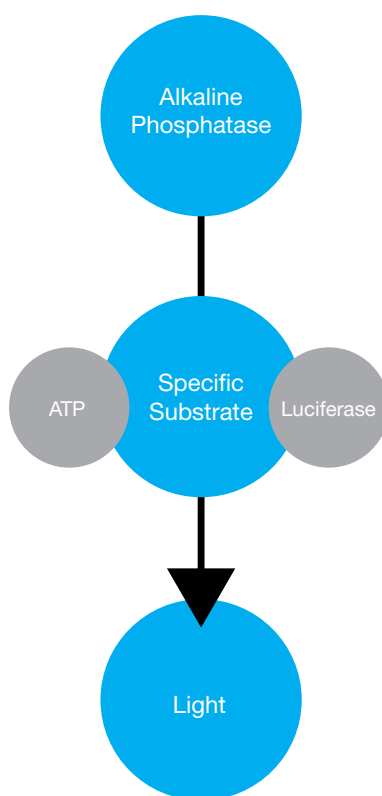
Why Test for Alkaline Phosphatase in the Dairy Industry?

Alkaline Phosphatase (ALP) is a naturally present enzyme in all raw milks. During effective pasteurization, this enzyme is inactivated to an acceptable level. This value varies among different pasteurized milk types: <350 mU/L for cow's milk (ISO Standard 11816-1), <300 mU/L for goat's milk, and <500 mU/L for sheep's milk. ALP measurements above these levels would, therefore, be considered indicative of a significant issue in the pasteurization process.

Because ALP is more heat stable than most pathogenic organisms, ALP can also serve as an indicator of overall product safety, although it cannot guarantee the tested product is completely free of undesirable organisms.

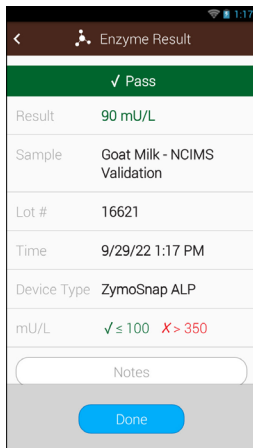
How does ZymoSnap Work?

ZymoSnap utilizes a bioluminescent method to detect the presence of ALP, ensuring high accuracy and low limits of detection. The assay provides clear, definitive results in 5 minutes without the need for additional testing.



The assay uses a single self-contained device and one simple procedure. Sample is added to ZymoSnap tube, the device is activated to release detection reagent, and the sample is incubated for 5 minutes. Results are then read in the EnSURE® Touch luminometer, as the reaction results in detectable light, which is measured by the instrument and stored for later access. Results are then displayed as a Pass, Caution or Fail reading. Positive controls are available and negative controls (baseline product) must be prepared to establish Pass/Fail limits for the EnSURE Touch instrument.

*Positive & Negative (baseline) control required by milk type/fat content/ kit lot. Hygiena recommends to review controls monthly for confirmation of pass/fail thresholds. No need to prepare daily controls, saving time and money.

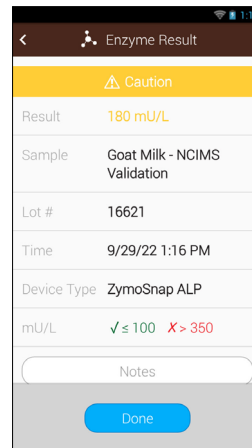


Pass

The result will appear on the instrument screen. A Pass result is shown.

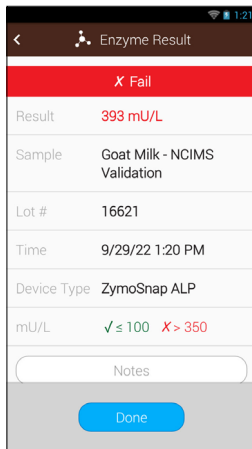
Results are based on the Pass and Fail parameters established in the app.

<100 mU/L ALP enzyme



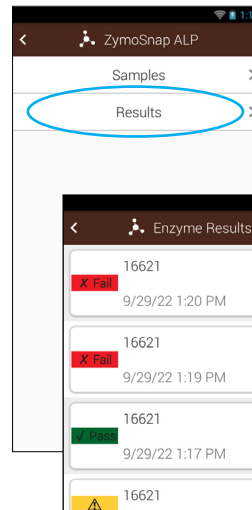
Caution

>100 mU/L
<350 mU/L ALP enzyme



Fail

>350 mU/L ALP enzyme



Results

Historic results can be viewed on the instrument by selecting the result option in the ZymoSnap app.

ZymoSnap Performance

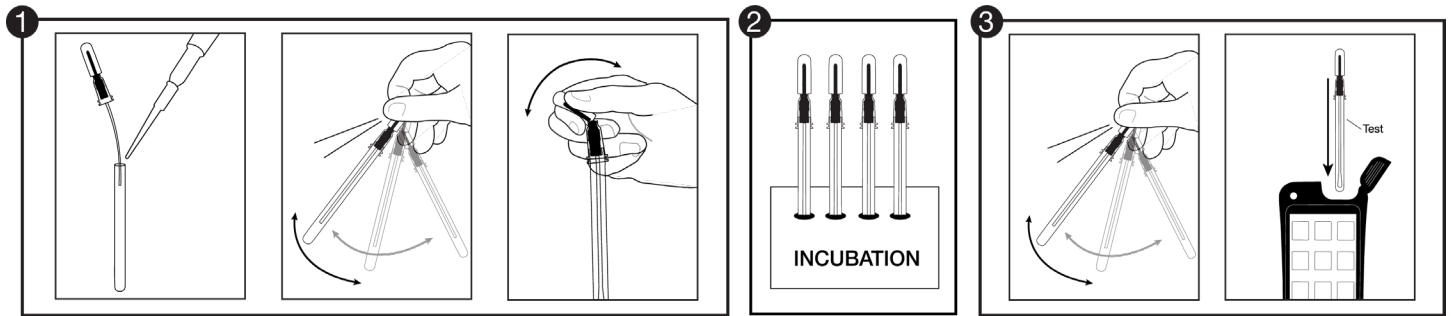
ZymoSnap has been AOAC® PTMSM validated for use with a wide variety of milk products, including:

- Whole Cow's Milk
- Semi-Skimmed Cow's Milk
- Skimmed Cow's Milk
- Chocolate Cow's Milk
- Strawberry Cow's Milk
- Cow's Cream (40%)
- Whole Goat's Milk
- Skimmed Goat's Milk

When compared to the Flurophos® ALP Test (ISO/IDF Reference method, ISO11816-1:IDF 155-1 and ISO11816-2:IDF 155-2), ZymoSnap provided accurate, linear, sensitive and rapid results across this full range of dairy sample types, equivalent or superior to the reference method. A summary of results can be found in the ZymoSnap technical bulletin.

Instructions for Use – How To Use

ZymoSnap's simple procedure provides quantitative ALP analysis, and dairy pasteurization verification for milks, creams, yogurts and shakes, in minutes.



Step 1: Preparation

- Add Sample - Mix - Snap to Activate
- Completely Self-Contained Test Device

Step 2: Incubation

- 5 Minutes at 37 °C
- Dry Block or Water Bath

Step 3: Results

- Mix and Insert into EnSURE Touch luminometer
- Results in 15 seconds

Ordering Information

| Product | Catalog Number |
|--|----------------|
| ZymoSnap ALP Alkaline Phosphatase Detection Test (100 units) | ZS-ALP-100 |
| ZymoSnap Positive Control Kit | ZS-ALP-PC |
| EnSURE Touch Luminometer | ETOUCH |

ZymoSnap Positive Control Kit

Positive Control Kit is intended to be used for validating the efficacy and quality of the ZymoSnap test device. The kit comes with 5 vials of 350 mU/L ALP for positive control testing.

Positive controls are required for each milk type/fat content/kit lot. Negative controls are easily prepared from the product being tested. Both sets of controls should be reviewed monthly to confirm Pass/Fail thresholds.

EnSURE Monitoring System

EnSURE monitoring system is a high-sensitivity luminometer that is used to detect various specific indicators and bacteria. The system includes SureTrend® data tracking software.