



## Standard Operating Procedure Fluorophos FLM200

### ALP Test

When the Fluorophos is switched on allow 2 hours before use to ensure complete electronic stabilization.

### Reagent Preparation – FLA225

1/ Pour the entire contents of one of the Substrate Buffer bottle into one of the powdered Fluorophos Substrate bottles.

2/ Mix by gentle inversion for 3 minutes, to dissolve all of the Substrate. Allow to stand for 15 minutes.

3/ Note date of mixing on bottle.

Shelf life will be 60 days, stored at 2-6°C.

To check reagent: warm 2 ml and place in Fluorometer. Run A/D Test (In Setup). Stabilized result should be less than 1200 (If over, replace reagent). If degrading quickly, contact QCL for advice.

### Sample Analysis – FLA225

1/ Dispense 2ml of prepared Fluorophos substrate into a sufficient number of cuvettes for the proposed tests.

2/ Place substrate cuvettes in the block heater for a minimum of 15 minutes.

3/ Press 'TEST' and select the 'ALP Dairy' menu.

4/ Scroll through the menu and press 'Enter' when the product to be tested is displayed.

5/ Pipette 75ul of the milk/cream sample, into a pre-warmed substrate cuvette.

6/ Mix immediately then insert the cuvette in the Fluorometer, within 20 seconds, and press 'START' to measure the sample.

### Calibration

#### Product Calibration – FLA250

1/ Accurately pipette 2ml of calibrators 'A' – 'B' – 'C' into 6 glass cuvettes. (two each per calibrator).

2/ Place cuvettes in the block heater for 10 minutes.

3/ Press 'CALIB' and select the 'ALP Dairy' menu.

4/ Scroll through the menu and press 'Enter' when the product to be calibrated is displayed.

DOCUMENT No.	FILENAME	AUTHOR	VERSION	REVISION DATE	PAGE NO.
SOP-004	Fluorophos FLM200	J Duncan	1.0	29/04/2015	1 of 4



5/ Pipette 75ul of the milk/cream sample to be calibrated into each of the pre-warmed calibrator cuvette's, replacing them in the block heater.

6/ Mix the first 'A' cuvette calibrator. Insert in the Fluorometer and press 'START'.

7/ When the measurement is finished measure the second 'A' calibrator.

8/ Follow the same procedure for 'B' and 'C' calibrators until the calibration is completed.

9/ The calibration procedure must be completed within 10 minutes of adding the sample to the calibrators.

10/ Recalibration should be performed every 3 months or after major service or if the instrument is moved or if quality controls indicate it is necessary.

11/ If calibration is rejected check accurate calibrator and sample volumes are used. Small variations in volumes will result in rejection.

### Control Tests

#### Daily Check - FLA280

1/ Dispense 2ml of the Daily Instrument Control (FLA280) into a clean cuvette.

2/ Place cuvettes in the block heater for 10 minutes.

3/ Press 'SETUP'. Then select the menu item 'A/D TEST'.

4/ With the sample chamber empty press 'START'.

5/ When settled the reading should be 302 +/- 4. If the reading is greater than 306 examine the cuvette chamber and filters for spillages and clean. If it cannot be brought down by cleaning contact a service engineer.

6/ Insert the warmed Daily Instrument Control cuvette into the sample chamber.

7/ When settled the reading should be 602 +/- 12.

8/ Record the value.

9/ If this value is out of range then slowly adjust the potentiometer screw on the side of the instrument to 602 +/- 12.

10/ Press 'STOP' twice to exit the 'A/D TEST' mode.

#### Daily QC Check

1/ Add 0.1ml of raw milk to 100ml of pasteurised milk and mix.

2/ Test as normal on the channel appropriate to the pasteurized milk.

3/ The result should be approximately 500mU/l but will vary greatly depending on variations in the raw milk.

DOCUMENT No.	FILENAME	AUTHOR	VERSION	REVISION DATE	PAGE NO.
SOP-004	Fluorophos FLM200	J Duncan	1.0	29/04/2015	2 of 4



## PhosphaChecks

### Pasteurisation Controls – FLA260

1/ Prepare one set of PhosphaCheck reagents, by adding 3.0 ml of deionised water to each of the 3 vials.

2/ Re-stopper the vials and mix gently for one minute, then let stand for 15 minutes.

### NORMAL Control

1/ To check a calibrated product channel, first pipette 75ul of the 'PhosphaCheck-N' into a pre-warmed substrate cuvette. Mix immediately, then within 20 seconds insert the cuvette in the Fluorometer and press 'START'.

2/ Milks & creams will register a result lower than 40 mu/L. For other product limits, refer to the enclosed PhosphaCheck test sheet.

### POSITIVE and NEGATIVE controls

1/ For Positive – Negative control checks, first calibrate a spare channel (A to F) using 75ul of the negative control as the calibrator sample.

2/ Next pipette 75ul of the 'Positive control' into a pre-warmed substrate cuvette and run a test. This should register a result within the test kit batch value, printed on the enclosed test kit instruction sheet.

3/ Finally pipette 75ul of the 'Negative control' into a pre-warmed substrate cuvette and run a test. This test should indicate a result of less 10 mu/l.

### Using the 75ul Pipette

1/ Ensure the 75ul pipette is correctly calibrated using the calibration key. The white plunger tip should extend from the pipette tip by 1mm.

2/ Depress the plunger fully.

3/ Immerse the pipette tip about 6-7mm into the liquid.

4/ Release the plunger smoothly and gently.

5/ Remove the pipette tip from the liquid and wipe the outside but do not wick out any fluid from the inside. Check no air bubbles are present.

6/ Immerse the pipette tip about 6-7mm into the liquid in the Fluorophos cuvette and depress the pipette plunger fully several times.

7/ Depress the plunger fully once more and, while depressed, remove the pipette from the cuvette.

8/ Start the Test.

9/ Put the pipette tip in some distilled water and depress the plunger several times. Then dry the outside of the pipette and the plunger tip while the plunger is depressed.

DOCUMENT No.	FILENAME	AUTHOR	VERSION	REVISION DATE	PAGE NO.
SOP-004	Fluorophos FLM200	J Duncan	1.0	29/04/2015	3 of 4



10/ The pipette tip should be replaced weekly or more often if necessary.

### **Cleanup of Major Cuvette Holder Spills**

Failure to clean liquid spills out of the cuvette holder may result in incorrect operation. Immediately take the following steps if liquid is spilled into the cuvette chamber before drying occurs.

1/ Unplug the power cord immediately.

2/ Remove any cuvette from the cuvette holder.

3/ Use tweezers, forceps, etc. as necessary, to remove any large pieces of broken glass. Do not scratch the cuvette well.

4/ Remove any liquid from the cuvette holder by inserting a cuvette holder cleaner straight down. Allow the cleaner to absorb liquid for about 20 seconds and then remove.

5/ Repeat with new cuvette holder cleaners as necessary until the cuvette chamber is empty.

6/ Moisten a clean cuvette cleaner with a small amount of distilled water. Insert the cleaner into the chamber to the bottom. Twist to clean the entire surface.

7/ Repeat with two or three dry cleaners to dry the cuvette holder.

8/ Replace the optical filters.

9/ With the power switch in the off position reconnect the power cord. Turn the instrument on and wait to warm up. Run controls to verify instrument performance.

DOCUMENT No.	FILENAME	AUTHOR	VERSION	REVISION DATE	PAGE NO.
SOP-004	Fluorophos FLM200	J Duncan	1.0	29/04/2015	4 of 4