



### FOODLAB

#### PURPOSE OF THE TEST

Alkaline phosphatase (ALP) is an enzyme that is normally present in crude milk and that can be inactivated by heating the milk at temperatures significantly above those required to destroy pathogen agents. Thus, the ALP test on milk enables to determine whether the thermal process has been carried out correctly. [www.cdr-mediated.com/alkaline-phosphatase-cow-milk](http://www.cdr-mediated.com/alkaline-phosphatase-cow-milk)

#### REAGENTS

R1 (pre-vialied in cuvette): Dietanol-amin 1.0 mol/L - pH 10.3 - Magnesium chloride 0.5 mmol/L.  
R2 (in vial): p-Nitrophenylphosphate 10 mmol/L.

#### METHODOLOGY

Test type: End Point.  
Color reading at 405 nm.  
Testing time: 30 minutes.  
It is possible to carry out test sessions with several samples, up to a maximum of 14.  
Calibration can be attained by aligning test and reference values.

#### TEST PRINCIPLE

Alkaline phosphatase causes the hydrolysis of p-Nitrophenylphosphate, if immersed in an alkaline medium, and forms a yellow compound with an intensity that is directly proportional to the concentration of ALP in the sample when measured at 405 nm. CDR's innovative method simplifies and accelerates the official procedure.

#### SAMPLE

Pasteurized milk.

### KIT



Pre-vialied disposable test tube.

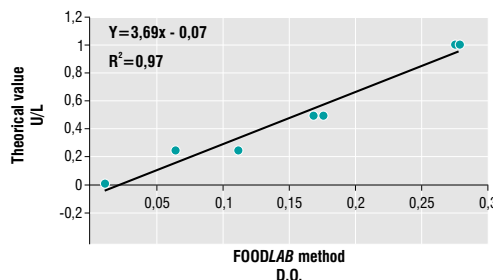
KIT CODE	SAMPLE VOLUME	RANGE
*300228 (10 tests)	150 µL	0,1 U/L - 5 U/L
*300225 (100 tests)		

### INSTRUMENT CALIBRATION

The calibration curve has been drawn by adding specific percentages of crude milk to pasteurized milk. The resulting values comply with those indicated in applicable literature (ALP testing for milk pasteurization" Cornell University - Dairy science facts -1998).

% OF CRUDE MILK	THEORETICAL VALUE U/L
Pasteurized only	0,01
0.05% of crude milk	0,25
0.1% of crude milk	0,5
0.2% of crude milk	1

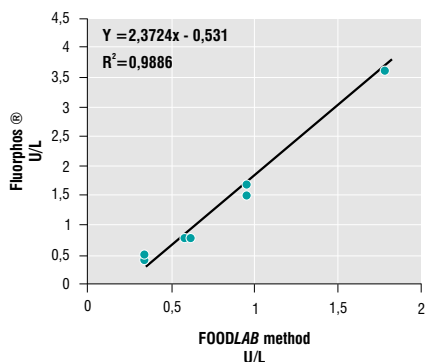
FOODLAB D.O.	THEORETICAL VALUE U/L
0,011	0,01
0,064	0,25
0,112	0,25
0,169	0,5
0,175	0,5
0,278	1
0,277	1



The calibration curve resulting from the double testing of the samples shows a very good correlation coefficient.



## COMPARATIVE TESTS



Comparative tests between **FOODLAB** and **\*Fluorophos® (Advanced Instruments)**. The results show a very good correlation between the two methods.

## REPEATABILITY TESTS

Test	ALP U/L
1	0,52
2	0,58
3	0,67
4	0,55
5	0,57
6	0,55
7	0,57

AVERAGE	0,57
DS	0,05
CV	8,6%

CDR's laboratories carried out repeatability tests obtaining good results.

## SUMMARIZED TABLE

LINEARITY	ACCURACY	REPEATABILITY	CORRELATION COEFFICIENT	SENSITIVITY	TESTING TIME	TEST/HOUR	UNIT OF MEASUREMENT
5 U/L	+/- 10%	CV < 10%	R > 0,98	0,1 U/L	30 min	25	U/L fosfatasi alcalina

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