

AlerTox® Sticks Total Milk

Validation Report

Cat No.	KIT3015 (10 tests) and KIT3016 (25 tests)
Test Name	AlerTox Sticks Total Milk
Description	AlerTox Sticks Total Milk is based on a lateral flow immunoassay and uses antibodies specific to the milk proteins beta-lactoglobulin and casein. The test is able to detect beta-lactoglobulin and casein residues in a large variety of food matrices and also in environmental samples.
Specificity and Sensitivity	The assay is specific for beta-lactoglobulin and casein and does not cross-react with other milk proteins. The limit of detection is 2.5 ppm of the mentioned milk proteins.
Storage	Store at 2-25 °C (36-77 °F)

Assay Procedure

Solid, liquid and surface samples: According to manual of use INS3009

Validation Protocol

41 samples were analyzed separately to determine the correlation between AlerTox Sticks Total Milk and commercially available ELISAs against casein and beta-lactoglobulin. The following data was obtained:

	Sample	Brand	ELISA Test	AlerTox Sticks Total Milk
1	Earth almond-based drink	n/a	positive	positive
2	Kamut-based drink	n/a	negative	negative
3	Soy-based drink	Vivesoy	negative	negative
4	Hazelnut-based drink	n/a	negative	negative

5	Oat-based drink	n/a	negative	negative
6	Soy drink with strawberry flavor	n/a	negative	negative
7	Almond drink	n/a	negative	negative
8	Rice flour	n/a	negative	negative
9	Thickener	Maizena	positive	positive
10	Roquefort sauce	n/a	positive	positive
11	Infant cereal	Milupa	negative	Negative
12	Yoghurt cake	Royal	positive	Positive
13	Precooked rice flour	n/a	negative	Negative
14	Bread mix	Proceli	negative	Negative
15	Choco Krispies	Kellogg's	negative	Negative
16	Tacos	Old El Paso	Negative	Negative
17	Dried tomatoes Risotto	Gallo	Positive	Positive
18	Spice mix for burritos	Old El Paso	negative	negative
19	Corn crackers	n/a	negative	Negative
20	Chocolate 60% cocoa	Nestlé	negative	Negative
21	Guacamole	Old El Paso	negative	Negative
22	Nachos	Old El Paso	negative	Negative
23	Rice snack chili crackers	Osaka	positive	Positive
24	Baking powder	Royal	negative	Negative
25	Guacamole seasoner	n/a	negative	Negative
26	Cookie	Gullón	negative	Negative
27	Cookie with milk chocolate	Digestive	positive	positive
28	Ketchup	Prima	negative	Negative
29	Breakfast cereal with dark chocolate	Fitness	positive	positive
30	Wheat crackers	DIA	positive	Positive
31	Sausage	Del Celler	positive	Positive
32	Corn cracker	Old El Paso	negative	Negative
33	Crab sticks	n/a	negative	Negative
34	Infant soy formula	NutriBEN	negative	negative
35	Breakfast cornflakes	n/a	negative	negative
36	Rice cake	n/a	negative	Negative

37	Breakfast cereals for babies	Milupa	negative	Negative
38	Milk chocolate	Milka	positive	positive
39	Fresh cake – Yogurt flavor	Royal	positive	positive
40	Rice flakes cereals	n/a	negative	negative
41	Chowder	Knorr	negative	negative

According to these results, the correlation between both techniques is 100% in the samples tested.

Also, 93 samples were analyzed with AlerTox Sticks Total Milk and the result compared with the labeling of the product. The results are showed in the following table:

	Sample	Result with AlerTox Sticks Total Milk	Concordance with label
1	Mayonnaise	Negative	Yes
2	Flan	Positive	Yes
3	Meat broth	Positive	Yes
4	Cocoa powder	Positive	Yes
5	Rice cereals with chocolate	Negative	Yes
6	Cheese snack	Positive	Yes
7	Milk chocolate cookies	Positive	Yes
8	Cookies with milk cream and chocolate	Positive	Yes
9	Cereal bar with red fruits	Positive	Yes
10	Breakfast biscuits	Negative	Yes
11	Bread crackers	Positive	Yes
12	Corn flour	Positive	Yes
13	Milk chocolate	Positive	Yes
14	Milk chocolate with almonds	Positive	Yes
15	Biscuits	Positive	Yes
16	Cereals with dark chocolate	Positive	Yes
17	Dehydrated vegetable soup	Positive	Yes

18	Dehydrated mushroom soup	Positive	Yes
19	Cheese sauce	Positive	Yes
20	Donut with sugar	Negative	Yes
21	Biscuits with vanilla filling	Negative	Yes
22	Soy sauce	Negative	Yes
23	Chocolate powder	Negative	Yes
24	Fried almonds	Negative	Yes
25	Duck pâté	Positive	Yes
26	Bread buns	Positive	Yes
27	White wine	Negative	Yes
28	High fiber biscuits	Positive	Yes
29	Bread crumbs	Negative	Yes
30	Nachos with cheese	Positive	Yes
31	Cocktail sauce	Negative	Yes
32	Chocolate and sugar (powdered)	Negative	Yes
33	Ground coffee	Negative	Yes
34	Pomace cream (Orujo)	Positive	Yes
35	Sugar-free biscuits	Positive	Yes
36	Caramel	Negative	Yes
37	Sour cream and onion snack	Positive	Yes
38	Chips	Positive	Yes
39	Cheese, tomato and oregano snack	Positive	Yes
40	Fried peanuts	Positive	Yes
41	Nut mix	Negative	Yes
42	Mustard, honey and onion snack	Positive	Yes
43	Paprika powder	Negative	Yes
44	Chorizo	Positive	Yes
45	Ham	Positive	Yes
46	Turkey breast extra juicy	Negative	Yes
47	Turkey breast	Negative	Yes

48	Spicy sausage	Positive	Yes
49	Sandwich Bread	Negative	Yes
50	Pancake mix	Positive	Yes
51	8 cereals and honey puree	Negative	Yes
52	Pear and apple puree	Negative	Yes
53	Vegetable, chicken and rice puree	Negative	Yes
54	Vegetable and meat puree	Negative	Yes
55	Vegetable, chicken and meat puree	Negative	Yes
56	Vegetable and fish puree	Positive	Yes
57	Banana, orange and biscuit puree	Negative	Yes
58	Cereal and honey puree	Positive	Yes
59	Apple, carrot and mango puree	Negative	Yes
60	Low-fat mayonnaise	Positive	Yes
61	Chocolate drink	Positive	Yes
62	Orange juice	Negative	Yes
63	Lemon soda	Negative	Yes
64	Strawberry milkshake	Positive	Yes
65	Fruit and milk drink	Positive	Yes
66	Sugar-free chocolate cookies	Positive	Yes
67	Gluten-free cookies	Positive	Yes
68	Sugar free vanilla wafers	Positive	Yes
69	Cereal bar with white chocolate	Positive	Yes
70	Allergen-free sandwich bread	Negative	Yes
71	Brioche	Positive	Yes
72	Cereal bar with dark chocolate	Positive	Yes
73	Anchovy-filled olives	Negative	Yes
74	Fried corn	Negative	Yes
75	Mussels with sauce	Negative	Yes
76	Turkey sausage	Negative	Yes
77	Ham and cheese snack	Positive	Yes

78	Bread cracker	Positive	Yes
79	Smoked bacon	Negative	Yes
80	Dehydrated fungi risotto	Positive	Yes
81	Dry grapes	Negative	Yes
82	Walnuts	Negative	Yes
83	Saffron	Negative	Yes
84	Vanilla ice-cream	Positive	Yes
85	Ground sesame	Negative	Yes
86	Artichoke puree	Positive	Yes
87	Dijon mustard	Negative	Yes
88	Red beans	Negative	Yes
89	Lentils	Negative	Yes
90	Green peas	Negative	Yes
91	Bulgur wheat	Negative	Yes
92	Golden linseeds	Negative	Yes
93	Brown linseeds	Negative	Yes

Validated Matrices

Baby food, biscuits, cereals, vegetal drinks, dehydrated food, baked products, chocolate cookies, chocolate cereals, chocolate, meat products, alcoholic and non-alcoholic drinks, sauces, cereals products, snacks.

Participation in Proficiency Tests

AlerTox Sticks Total Milk was tested with FAPAS material 27240B (Infant Soy Formula). The assigned result for the kit with more datapoints on this round was 21.3 mg/kg milk proteins. AlerTox Sticks Total Milk yielded a positive result (>2.5 ppm) for this sample. Sample 27240A (Infant Soy Formula) was negative with 89% consensus and AlerTox Sticks Total Milk yielded a negative (<2.5 ppm) result.