

AlerTox® Sticks Total Milk

Validation Report

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| 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 |

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|----|--------------------------------------|-------------|----------|----------|
| 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 |

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|----|------------------------------|--------|----------|----------|
| 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 |

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| 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 |

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|----|-----------------------------------|----------|-----|
| 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 |

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|----|--------------------------|----------|-----|
| 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.