

Short Application Protocol for Swab Test in Combination with the SENSISpec Food Allergen ELISAs

1. APPLICABILITY

The following Procedure is applicable for all the **SENSISpec Food Allergen ELISAs**.

2. REQUIRED INSTRUMENTS AND REAGENTS

- Swab Stick
- Reaction Tube (1-4 ml)
- Prediluted Extraction Buffer (provided with the ELISA kit)
- 1 mL Pipette

3. SAMPLE EXTRACTION PROCEDURE – DRY SURFACES, IN-HOUSE TESTING

- 1) Mark an area of 10 x 10 cm on the surface to analyze.
- 2) Pipet 1 mL of prediluted extraction buffer into the reaction tube.
- 3) Dip the swab into the extraction buffer in the reaction tube.
- 4) Swab the marked area first in horizontal then in vertical lines, rotate the stick while swabbing the area.
- 5) Dip the stick back into the tube with the extraction buffer and shake thoroughly.
- 6) Directly apply the solution as a sample in the corresponding assay.

4. SAMPLE EXTRACTION PROCEDURE – WET SURFACES, IN-HOUSE TESTING

Apply same method as described for dry surfaces without prior need to moisten the swab.

5. SAMPLE EXTRACTION PROCEDURE – DRY SURFACES, SEND SAMPLE TO EXTERNAL LAB

- 1) Mark an area of 10 x 10 cm on the surface to analyze.
- 2) Pipet 1 mL of prediluted extraction buffer into the reaction tube.
- 3) Dip the swab into the extraction buffer in the reaction tube.
- 4) Swab the marked area first in horizontal then in vertical lines, rotate the stick while swabbing the area.

- 5) Place the swab back into the tube and break off the tip.

- 6) Close the sample tube with the cap tightly, label and send it to the lab.

6. SAMPLE EXTRACTION PROCEDURE – DRY SURFACES, SEND SAMPLE TO EXTERNAL LAB

Apply same method as described for dry surfaces without prior need to moisten the swab.

7. CALCULATION OF RESULTS

Since the normal sample extraction process as stated in the test instruction is already accounted for in the ready-to-use standards of the respective kits, there have to be done some calculations in order to receive the mass of contamination related to the area:

- 1) Calculate the real concentration of the swab solution by dividing it with the dilution factor of 20 and converting it from mass/mass to mass/volume.

Example: the result of the ELISA was 10 ppm (µg/g) of peanut. The concentration of the solution was then: $(10 \text{ µg/g}) / (20 \text{ mL/g}) = 0.5 \text{ µg/mL}$

- 2) Calculate the total mass in the swab solution by multiplying the concentration with the volume.

Example: If the volume of the swab solution was 1 mL and the concentration was 0.5 µg/mL of peanut, the total mass of peanut is 0.5 µg

- 3) Calculate the mass per area by dividing the total mass through the swabbed area.

Example: If the total mass was 0.5 µg of peanut and the swabbed area was 100 cm², the mass per area is 5 ng/cm².

Please note that the dilution factor of 20 is not applicable for the SENSISpec Gliadin ELISA.