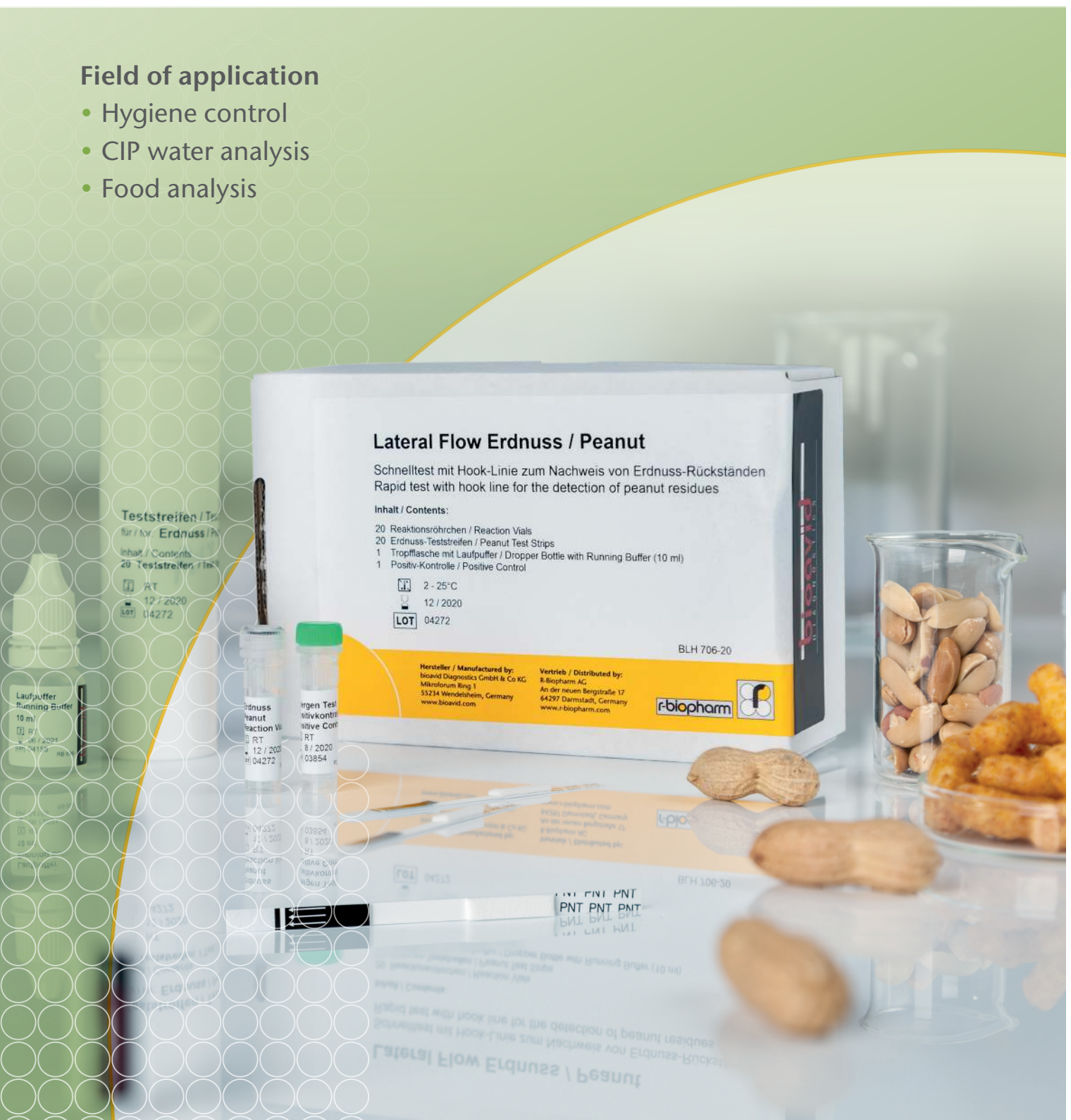r-biopharm®

Lateral flow tests from bioavid with hook line

Reliable identification also of high positive samples

Field of application
- Hygiene control
- CIP water analysis
- Food analysis

Benefits

Extended functionality: included hook line for safe identification of high positive samples

Quick and reliable results in 10 minutes

Specifically developed accessories available for hygiene control (swabbing kits) (Art. No. BS800-25 and BS801-25)

All included: all further reagents required for the assay – including a positive control – are contained in the test kit

Also suitable for non-laboratory staff

New functionality – tracking the hook effect

The hook effect (or "overload"-effect; Standard EN 15633-1. 2019) is observed when a very high amount of an analyte is present in the sample. In this case, the analyte's amount exceeds the amount of color-labelled antibodies and the ratio between both needed for the formation of the test band becomes imbalanced. Although the analyte is present, only a faint or even no test band is visible. Hence, there is risk for a falsely low or negative interpretation of a test result. This effect becomes visible by the hook line. A missing hook line indicates high allergen content in a sample. In this case, test users must not interpret a missing test line as negative.

1 to 3 purple lines may appear in the reaction field on the strip. The upper line is the control line **C**. It indicates that the test has been performed correctly. The middle line is the hook line **H**. It is visible in a valid test if the allergen concentration does not exceed ca. 1,000 or 10,000 ppm (depending on test). The lowest line is the test line **T**. It indicates the presence of the target residue in the sample in the range of approx. 1 to 1,000 ppm.
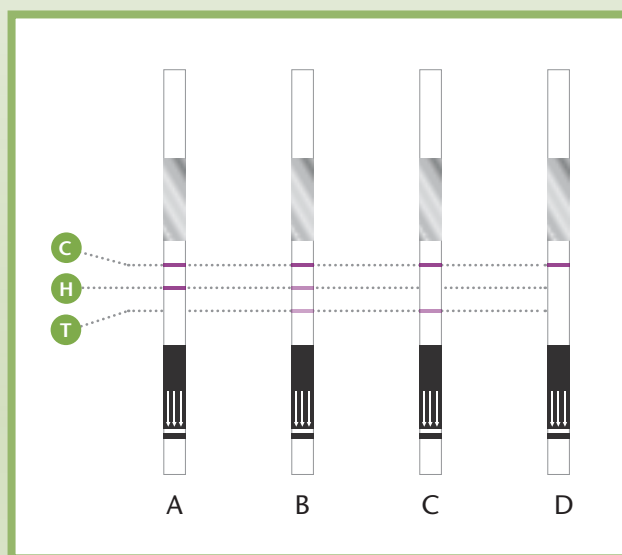
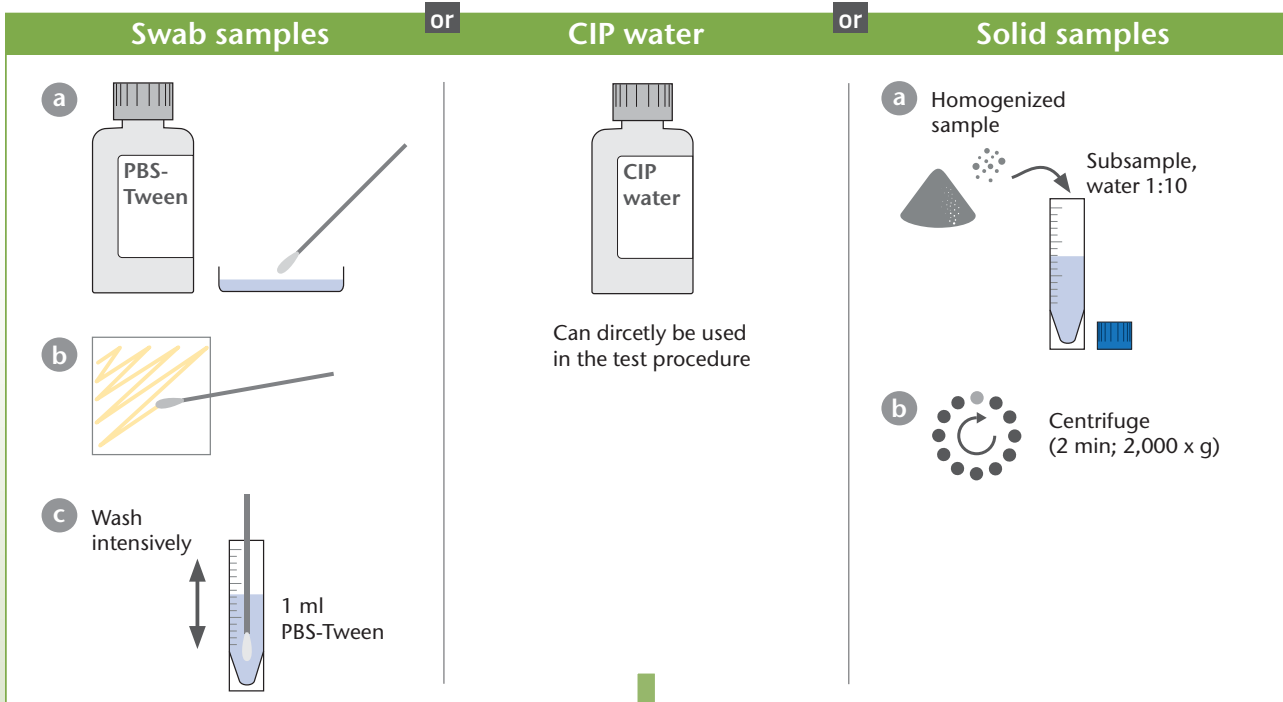**C** and **H** line present, no test line: negative result (A)

3 lines present: positive result (B)

C line and **T** line present, **Hook line faint or absent:** high positive result (≥ 1,000 ppm or 10,000 ppm) (C)
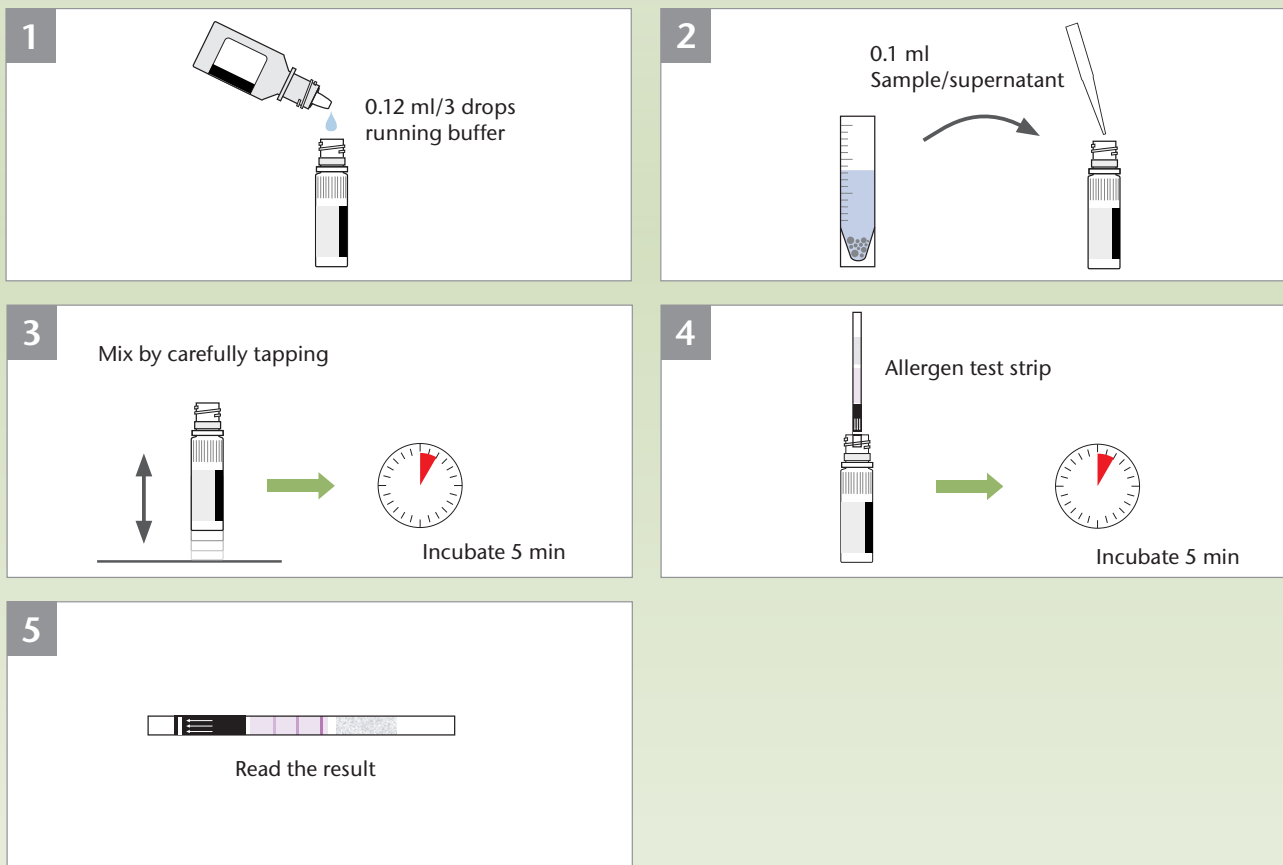
Only C line present: suspected high positive, repeat test with higher sample dilution (D)

No C line: Test is invalid

1 Sample preparation

Swab samples	or	CIP water	or	Solid samples

Swab samples

a PBS-Tween

b

c Wash intensively — 1 ml PBS-Tween

CIP water

Can dirctely be used in the test procedure

Solid samples

a Homogenized sample → Subsample, water 1:10

b Centrifuge (2 min; 2,000 x g)

2 Test procedure

1 0.12 ml/3 drops running buffer

2 0.1 ml Sample/supernatant

3 Mix by carefully tapping → Incubate 5 min

4 Allergen test strip → Incubate 5 min

5 Read the result

Food allergies

In the case of a food allergy, certain parts of a food (allergens) trigger an immune reaction in humans. This immune reaction causes a wide range of symptoms (e.g. slight prickling in the mouth, rash, anaphylactic shock). Worldwide, about 2 - 8 % of people suffer from a food allergy. Since there is currently no effective therapy for food allergies, sensitized persons must follow an allergen-free diet. Therefore, labelling allergens on food is essential. For prevention of unintended contamination, food industry must consider a respective allergen management (e.g. testing of raw materials, checking production lines). Especially for the last aspect, lateral flows offer a fast, easy and reliable method.

Fast replies - Lateral Flow Devices (LFDs)

LFDs are a simple and fast technique combining chromatography and an immunological method to detect the presence or absence of an analyte (here: allergen). Within 10 minutes, a reliable result can be observed without the need for elaborate equipment. Thus, they are applicable everywhere.

Lateral flow tests including hook line

Product	Description	No. of tests/amount	Art. No.
Almond			
bioavid Lateral Flow Almond	Qualitative detection of Almond; Hook line upper limit: 1,000 mg/kg (ppm)	20 strips	BLH701-20
Coconut			
bioavid Lateral Flow Coconut	Qualitative detection of Coconut; Hook line upper limit: 10,000 mg/kg (ppm)	20 strips	BLH700-20
Hazelnut			
bioavid Lateral Flow Hazelnut	Qualitative detection of Hazelnut; Hook line upper limit: 1,000 mg/kg (ppm)	20 strips	BLH704-20
Mustard			
bioavid Lateral Flow Mustard	Qualitative detection of Mustard; Hook line upper limit: 1,000 mg/kg (ppm)	20 strips	BLH703-20
Peanut			
bioavid Lateral Flow Peanut	Qualitative detection of Peanut; Hook line upper limit: 1,000 mg/kg (ppm)	20 strips	BLH706-20

Detection limit for all tests is approx. 1 mg/kg (ppm) allergen; result is available after 10 minutes.