Phadebas® DLA2

DETECTION OF LOW AMYLASE ACTIVITY

Instructions for Use

Introduction

This document describes the use of the product; Phadebas® DLA2 - Detection of Low Amylase Activity. The product is intended to be used for detection of low levels of α-amylase activity specifically, in a variety of liquid samples, including opaque and colored ones.

Product information

The Phadebas DLA2 package contains five dishes. Each dish has 7 premade wells for samples, references and a negative control. The gel is buffered to pH 6, containing ions for optimal activity also including preservatives to prevent microorganism growth.

Shelf life and storage

Store in original sealed zip-bag, in the package at room temperature.
The expiry date is printed on the outer label and on the dish.

Laboratory equipment and materials required.

(Not provided)

Face covering
Gloves
70 % Ethanol
Automatic pipette or dispenser (15 µl)
Clean pipette tips
Heating cabinet
Reference sample
Negative control

Before use and preparation

The working area must be cleaned and wiped off with 70% Ethanol before use.

Always use face covering and gloves when working with Phadebas DLA2. Use a clean pipette with a clean tip to prevent false positive results.

To make a semi-quantitative determination of residual enzyme activity, dilute the same α-amylase sample as used with deionised water. Make a series of references and apply these on a dish. Prepare references freshly before use.

Viscous and solid samples must be diluted with deionised water to form a liquid sample, before application.

Test procedure

Pipette 15 µl of the test sample, reference solution and a negative control into separate wells of the same petri dish.

Put the lid on the dish after sample application.
For a semi-quantitative analysis incubate the dish at temperature optimal for the of your specific α-amylase, (between room temperature and 70°C), with the blue side up for 16 hours, in a heating cabinet.

Alternatively, for a rapid detection of α-amylase activity, incubate the dish for 2-4 hours. Samples containing medium and high levels of α-amylase could be detected as soon as in 2 hours, while samples with low levels of α-amylase require longer incubation time.

Interpretation of the results

A clear zone around the sample well indicates an α-amylase detection. The diameter of the clear zone of the sample can be compared with the diameter of an α-amylase reference sample of known concentration, allowing for a semi-quantitative assessment of the sample's α-amylase content.

If no clear zone around the sample well is present, this should be interpreted as either lack of a-amylase activity or activity below the detection limit of this test.
If the samples have been diluted, keep in mind the dilution factor. When calculating activity, first compare the diameter of the sample zone with reference to estimate the activity, then multiply the activity with the dilution factor.

Waste disposal and recycling

Recycle cardboard and plastic packaging. The dish, including the gel, should be discarded as normal waste.

Waste handling of the product

The product is not classified as hazardous waste.
Work with the dish should take place in such a way that the product does not get into drains, waterways or soil.
If the dish breaks and the gel leaks out, collect spillage with caution and discard into normal waste.

Warranty

Any change or modification in the procedure not recommended by Phadebas AB may affect the results, in which event Phadebas AB disclaims all warranties expressed, implied or statutory, including the implied warranty of merchantability and fitness for use. Phadebas AB and its authorised distributors, in such event, shall not be liable for damages indirect or consequential.

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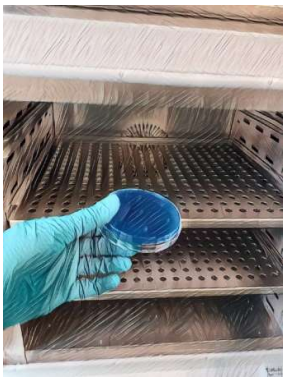
1. Always use clean face covering and gloves.

2. Use a new clean tip to pipette into each well.

3. Sample must be in the liquid form, if not dilute with deionised water.

4. Into each well, pipette 15 µl of the sample, reference or negative control for best result interpretation.

5. Cover the petri dish with the lid after sample application.



6. Incubate the dish upside down (blue side up) at the preferred temperature, between room temperature and 70°C, depending on the temperature optimum of the specific enzyme analysed.

7. Incubate for 16 h.

8. Evaluate the results and compare to the reference.

9. A clear zone around the well indicates α-amylase activity.

10. The activity could be estimated by comparing the diameter of the clear zone with a diameter of a known reference.

11. If no clear zone appears, α-amylase activity is below detection limit.

12. Recycle cardboard and plastic and discard the dish into normal waste.

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