



OPERATOR'S GUIDE

PERSPIROMETER TEST KITS
706-799 and 706-801

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Setting the Standard

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**PERSPIROMETER TEST KIT for EN ISO 105-E04
(706-799)**

To be used for preparing the alkaline and acid test solutions for EN ISO 105-E04.
Please note that this kit is not suitable for Marks and Spencer Test Method C7.

CONTENTS

| | |
|-----------|--|
| 200 g | L-Histidine Monohydrochloride Monohydrate $C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ |
| 2 kg | Sodium chloride NaCl |
| 500 g | Disodium hydrogen orthophosphate dihydrate $Na_2HPO_4 \cdot 2H_2O$ |
| 500 g | Sodium dihydrogen orthophosphate dihydrate $NaH_2PO_4 \cdot 2H_2O$ |
| Pack of 6 | Vials of concentrated sodium hydroxide NaOH |
| 2 Reels | Narrow Range pH Papers (pH4-6) |
| 2 Reels | Narrow Range pH Papers (pH6-8) |
| 1 | 1 litre Measuring cylinder |
| 1 | 1 litre Beaker |
| 1 | Spatula |
| 1 | Glass rod |
| 10 | Disposable gloves |

The kit contains sufficient chemicals for preparing approximately 200 litre each of alkaline and acid solutions

METHOD

Alkaline Solution (pH 8.0)

0.50 g L-Histidine monohydrochloride monohydrate
5.00 g Sodium chloride
2.50 g Disodium hydrogen orthophosphate

Carefully weigh out the above chemicals and dissolve in distilled water. Dilute to 1 litre using distilled water. Mix thoroughly by pouring solution from measuring cylinder to beaker and back. Check the pH of the solution using the narrow range pH papers (pH6-8) and adjust, if necessary, using 0.1N sodium hydroxide solution, until pH 8.0 is achieved.

Acid Solution (pH 5.5)

0.50 g L-Histidine monohydrochloride monohydrate
5.00 g Sodium chloride
2.20 g Sodium dihydrogen orthophosphate

Method as for Alkaline Solution, but pH 5.5 is required. Use narrow range pH papers (pH4-6) Again, adjust with 0.1N sodium hydroxide solution, if necessary.

NOTES

Making 0.1N (decinormal) sodium hydroxide solution

This solution is prepared by diluting one vial of concentrated sodium hydroxide with 500 ml of distilled water. This solution may be stored, once prepared, in a suitable container, e.g., glass flask with stopper.

Adjustment of pH

Using the appropriate narrow range pH papers, check the pH of the solution. If adjustment is necessary, add the 0.1N sodium hydroxide solution, a few drops at a time, mixing well and re-checking, as before, until the correct pH is achieved

Accuracy

The accuracy of this test can be maintained and improved by:

- Using a volumetric flask (1 litre) in place of the measuring cylinder (1 litre) supplied, for making up the solutions and for preparing the 0.1N sodium hydroxide solution. The stopper supplied with the volumetric flask facilitates shaking of the contents to ensure good dissolution.
- Using a pH Meter in place of narrow range pH papers
- Using an accurate balance with a resolution of at least 2 decimal places, i.e. 0.01 g, for weighing out of the chemicals

General

- Test solutions must be freshly prepared
- Test solutions must be labelled to avoid mixing them up

PERSPIROMETER TEST KIT for AATCC 15 (706-801)

To be used for preparing the acid test solution for AATCC 15.

CONTENTS

| | | |
|---------|--------|---|
| 706-704 | 2 kg | Sodium Chloride |
| 706-774 | 500 mL | Lactic Acid, USP 85% |
| 706-775 | 1 kg | Di-sodium Hydrogen Phosphate, Anhydrous |
| 706-703 | 100 g | L-Histidine Monohydrochloride Monohydrate |
| 706-791 | 1 pack | Disposable Gloves - per pack (10) |
| 716-801 | 1 | 1 litre Measuring cylinder |
| 716-802 | 2 | 1 litre Beaker |
| 716-821 | 5 | Petri Dish |

METHOD

Acid Solution (pH 4.3)

| | |
|----------------|--|
| 10 ± 0.01 g | sodium chloride (NaCl) |
| 1 ± 0.01 g | lactic acid, USP 85% |
| 1 ± 0.01 g | sodium phosphate, dibasic, anhydrous (Na ₂ HPO ₄) |
| 0.25 ± 0.001 g | L-Histidine monohydrochloride monohydrate |

Carefully weigh out the above chemicals and dissolve in distilled water. Dilute to 1 litre using distilled water. Mix thoroughly by pouring solution from measuring cylinder to beaker and back. Check the pH of the solution using the narrow range pH papers (pH4-6), pH 4.3 ± 0.2 is required.

Accuracy

The accuracy of this test can be maintained and improved by:

- Using a volumetric flask (1 litre) in place of the measuring cylinder (1 litre) supplied, for making up the solution and for preparing the 0.1N sodium hydroxide solution. The stopper supplied with the volumetric flask facilitates shaking of the contents to ensure good dissolution.
- Using a pH Meter in place of narrow range pH papers.
- Using an accurate balance with a resolution of at least 2 decimal places, i.e. 0.01 g, for weighing out of the chemicals.

General

- Test solution must be freshly prepared.