

# LABORATORY EQUIPMENTS



Made in EU

**Pegasil**<sup>®</sup> by **ZIPOR**



Leather permeability and absorption machine

**EL-31**

**Standards:** SATRA TM47 ; UNE 59-035-94

**Commercial Services:**  
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# LABORATORY EQUIPMENTS

## Leather permeability and absorption machine

### PURPOSE

This test equipment is intended to assess the amount of water vapour a single material or assembly will absorb and transmit through its structure in a specified time period.

This test method is mainly applicable to leathers and textiles used in footwear uppers and clothing.

### DESCRIPTION

This test machine is equipped with 12 stations. The test method attempts to simulate the environment within a shoe, i.e. 100% relative humidity at foot temperature, as well as assess the amount of moisture transmitted through the material, the quantity of moisture absorbed by the upper can also be determined. This is important because although some materials may be impermeable the ability to absorb moisture means that the foot will feel dry to the wearer. The moisture can desorb from the material by evaporation once the shoe is off the foot.

To perform the test a assembly of discs of outer material lining (if used in the footwear) and a standards hose (sock) fabric is clamped and sealed across the top of a suitable plastic pot containing distilled water. The water inside the pot is maintained at a temperature of 32°C by resting the pot in a temperature-controlled water bath. The atmosphere outside the pot is maintained at 20°C and 65% relative humidity by carrying out the test in a conditioned room and maintaining a flow of air across the top of the pot at a speed equivalent to a brisk walking pace. If the outer is permeable, water vapour passes through the cotton hose and the test material in the same way that perspiration would in a shoe.

The permeability of the material is determined by measuring the weight loss of the assemble at intervals throughout a six-hour period. The absorption of the upper material, lining and the standard cotton hose are measured by weighing each disc at the start and end of test.

#### Supplied with:

. Operating instructions ; conformity / calibration certificate  
. Plastic Jars ; spring assemblies

#### Standards:

SATRA TM47 ; UNE 59-035-94

#### Power Consumption:

1500 W

#### Noise:

63 db

#### Power Supply:

220 V.AC - 50 / 60 Hz

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