TSY-W3/3 Electrolytic Detection Method Water Vapor Permeability Tester

Electrolytic detection water vapor permeability tester is applicable in water vapor permeability test of packaging materials such as plastic films, laminated films, etc, and many kinds of barrier packaging materials in pharmaceutical industry. By measuring the water vapor transmission rate, technical index of products (packaging materials e.g.) can be controlled and adjusted, in order to meet different demands in product application.

1. Characteristics

·Electrolytic principle, high precision and automatic testing.
·Highly sensitive system, accurate and reliable test data.
·Three independent test chambers can give respective test data.
·Non-stop test，with the highest test efficiency.
·Users can select the test mode from several options.
·Controllable humidity and temperature, easy to realize several test environment，and no strict requirement to lab environment.
·Novel and unique method of sample clamping, convenient and reliable.
·Large LCD screen display, test data clear at a glance.
·Made of high-quality and world-famous parts, stable and reliable performance.
·Friendly human-equipment interaction, easy to operate.
·RS-232 standard port communication
·Test process controlled by computer, one-key operation.
·Professional software support, perspicuous test process shown by curves.

2. Technical data

Test range：0.001 ~ 50 g/m^2.24h（normal） 0.01 ~ 1000 g/m^2.24h（optional）
Test temperature：5 ~ 75℃
Temperature accuracy：±0.1℃
Humidity range：100%RH，0%RH，11～98%RH（saturated salt liquid）standard 90%RH
Carrier gas flux：100 ml/min
Sample quantity：1 ~ 3 pieces
Test area：50 cm^2（single chamber）
Specimen size：Φ100 mm，thickness＜1 mm（accessories needed if thicker）
Carrier gas：99.999% highly pure nitrogen
Power：AC 220V 50Hz
Dimension：820（L）mm×600（B）mm×425（H）mm
Net weight： 81 kg

3. Structure

The system is made up of mainframe, communications software and temperature controller. Mainframe for the test, and temperature controller for supplying test conditions.

4. Principle

Clamp the specimen between dry and humid chambers. Due to the humidity difference between the two sides of the specimen, water vapor permeates from high humidity chamber to the low one. And in the low humidity chamber, water vapor is brought to sensor by dry carrier gas; at the meantime, the sensor generates electrolytic signals. By analyzing and calculating those signals, the water vapor transmission rate and permeability coefficient of the material can be determined.

5. Standards

ISO 15106-3、DIN 53122-2、YBB 00092003

6. Configuration

Mainframe, temperature controller, decompressed valve of nitrogen tank, desiccant, sample cutter, vacuum grease, professional software, communication cables, porous ceramic plate
Note：Users provide gas source, distilled water and salt reagent themselves.