

### Quality Test Plan

**Equipment name : Spray Pyrolysis Equipment**

**Mode/ Serial no : HO - TH-04/other models**

Sl No	Specific Test Conducted	Test method	Spec./Accepted values	No. of times repeated
1.	Basic Inspection	Model No., Painting , Finishing , stability and other visual parameters		1
2.	Vibration and noise checking	Run a sample program and check		1
3.	Functioning of home and far limit sensors of the XY stage.	Run to Home and far position and it will stop automatically.		2
4.	Speed and travel of the XY stage	Run the XY Stage with a specific speed and check the travel speed by checking the time.		2
5.	Functioning of home and far limit sensors of the dispenser.	Operate the dispenser throughout its travel range in 'load' and 'drain' mode.		1
6.	Exhaust fan and the chamber light	Switch on the Exhaust fan and chamber and check working.		1
7.	Check the voltage at solenoid valves input	Using a Voltmeter	1 % Error maximum	1
8.	Compressor pressure	Verify that the compressor cuts off at the set pressure level		3
9.	Connectivity	Check the connectivity between the software and the instrument using RS232/USB cable		1
10.	Flow rate	Fix the container in the dispenser and verify the flow rate at different set values	1 % error max.	1



11.	Flow switch	Verify the functioning of the flow switch at various modes like load, drain and spray		1
12.	Flow test	Load water from a beaker to the container, drain it and check for continuous flow		1
13.	Flow rate and Speed	Operate the instrument using different sample programs of different flow rates and speed.		1
14.	Spray quality	Verify the quality of spray varying the pressure level		3
15.	Nozzle test	Test all the three types of nozzles - regular, syringe pump and ultrasonic types		1
16.	Ultrasonic nozzle	Ensure that the ultrasonic nozzle power supply is not heating up excessively during operation.		5
17.	Temperature controller and sensor	Verify the parameters entered in the temperature controller - sensor type (K type), low set point (15 Degree) and high set point (500 Degree).		1
18.	Temperature controller and sensor	Auto-tune the controller at 300 Degree Celsius set point		1
19	Temperature controller and sensor	Verify the displayed temperature using an external temperature sensor. Check for uniformity of the temperature across the whole area of the top plate		3
20	Temperature controller and sensor	. Compare the displayed temperature with the external sensor display at different set points		1
21	Hot plate	Check continuous functioning of the hot plate for one hour		1