



CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name : Silar coating unit

Date:

Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure: (

All the tests are performed based on the theory of the respective experiment and/or by calibrated instruments.)

Sl No	Specific Test Conducted	Test Result	Specification/ Accepted values	Pass /Fail	Remarks
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters		
2.	Vibration and noise checking		Run a sample program and check		
3.	Keyboard/ Touch screen checking		Enter all the alpha numeric values and check its functioning		
4.	Up-Down travel and limit checking		Move the sample holder up side and down side till it reaches the limit		
5.	Travel length		Verify the travel length by running a sample program with specific travel length say 50 mm		
6.	Travel speed		Verify the travel speed by running a sample program with specific travel speed (both Dip and retrieval) in um/Sec and mm/Sec		
7.	Dip & dry duration		Run a sample program with specific Dip and Dry duration. Sec., Min. & Hour		
8.	Sample holder positioning. (centering to the beaker)		Run a sample program with Dip in all the beakers and check the centering at each dip position.		
9.	Magnetic stirrer Function		Check the magnetic stirrer with beaker and run @ max rpm.		
10.	Heater Function		Turn on the heater and check the temperature.		
11	PC -Software testing		Compose and run a sample program in PC-Software.		

Checked by

Approved by

JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on



CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name : Syringe pump.

Date:

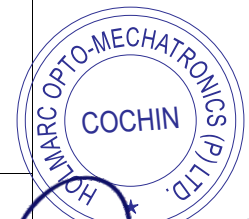
Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure: (

All the tests are performed based on the theory of the respective experiment and/or by calibrated instruments.)

Sl No	Specific Test Conducted	Test Result	Specification/ Accepted values					Pass/Fail
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters					
2.	Vibration and noise checking		Run a sample program and check					
3.	Keyboard/ Touch screen checking		Enter all the alpha numeric values and check its functioning					
4.	Limit switch positioning		Adjust the far limit sensor position as suitable for 20ml glass syringe.					
5.	Limit checking		Run home and far -check the stage movement stops in home and far position.					
6.	Syringe pump		Run sample programs and check the flow rates and corresponding volumes.					
7.	PC –Software testing		Run sample programs in software also					
	Flow rate		Sl. No.	Set(ml/min)	Measured(ml/min)	Error (%)	Permissible Error (%)	
			1					
			2					
			3					
	Volume		1					
			2					
			3					



[Signature]

Checked by

.....

Approved by

.....

JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



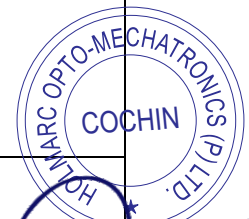
Quality Test Plan - Physics lab Equipment

Equipment name : Michelson Interferometer

Mode/ Serial no : HO - ED -INT- 06

Standard Test procedure / method: All the experiments are done as per the theory of the experiment or by using calibrated devices.

No	Specific Test Required	Test Method	Specification/ Accepted values	No. of times to be repeated
1.	Micrometer Calibration	Set up Michelson interferometer & rotate the micrometer and count the number of fringes	One fringe corresponds to $\lambda/2$ (250-300 Microns)	5
2.	Laser: beam quality, power	Point the laser to a screen and verify the beam quality, check the power using a power meter	Power will be 5 mW 10% Error Accepted	
3.	Pressure cell	Check the leakage by applying some pressure and wait for 5 minutes	Max. 5% less of the value accepted	1
4.	Glass Slide rotation stage	Check the fringe movement by rotating the glass slide	8 Degree With 10% Error Accepted	3
5.	Wavelength of the Laser	Set up Michelson Interferometer with provided laser and note down the movement corresponds to N fringes	650 +/- 10 nm accepted	1
6.	Visual Inspection	Inspect all mechanical, electronic and optical parts.	As per design	



Checked by

.....

Approved by

.....

JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



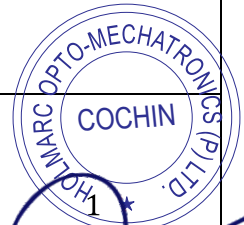
Quality Test Plan - Physics lab Equipment

Equipment name : Optical Chopper

Model/ Serial no : HO-IAD-OC-01

Standard Test Procedure / Method: All the experiments are done as per the theory of the experiment or by using calibrated devices.

Sl. No	Specific Test Required	Test Method	Specification/ Accepted values	No. of times to be repeated
1.	Visual Inspection	Inspect all Mechanical, Electronic & Optical Parts	As per design/ Specifications	1
2.	Chopper Frequency Use REF OUT (Back Panel)	Check with each Disc for the frequency range (with CRO). Make sure no unusual loud noise	Two Slot 10Hz to 200 Hz Six Slot 100 Hz to 600 Hz Thirty Slot 200Hz to 4000Hz	1
3.	Chopper Frequency Fluctuations	Check the frequency fluctuations for all the Discs	+ -2Hz	1



Checked by

.....

Approved by

.....

JOLLY CYRIAC
Managing Director





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name : Honeycomb Breadboard Date:

Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure: (

All the tests are performed based on the theory of the respective experiment and/or by calibrated instruments.)

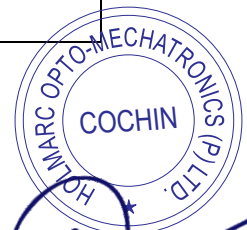
SI No	Specific Test Conducted	Test Result	Specification/ Accepted values	Pass/Fail
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters	
2.	Vibration and noise checking		Assemble the bread board and study the vibration damping	
3.	Dimension		Check all the dimensions using the scale	
4.	Compressor		Switch on the compressor and check the pressure	
5.	Air leakage testing		Pressurize the supports and keep for long time and check the pressure changed or not	

Checked by

.....

Approved by

.....



JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name : Syringe pump. Date:

Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure: (

All the tests are performed based on the theory of the respective experiment and/or by calibrated instruments.)

SI No	Specific Test Conducted	Test Result	Specification/ Accepted values	Pass/Fail
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters	
2.	MCB, Stop, lamps, Fan etc		Verify the functioning of MCB, emergency stop button, chamber lamp, exhaust fan, controller power switch and halogen lamp.	
3.	PC Connectivity		Connect the system with computer using cables and check connection	
4.	Vibration, noise & RPM checking		Run the Mandrel at max rpm and check vibration /RPM/Noise	
5.	Electrical Continuity		Verify the electrical continuity from the mandrel body to the negative terminal, for all the mandrels.	
6.	Syringe pump-Vibration and noise		Check the noise and vibration level of the syringe pump	
7.	Limit testing		Run the syringe pump to home and far limits	
8.	Limit adjustment		Adjust the far limit sensor position as suitable for 20ml glass syringe	
9.	Flow rate		Measure the actual flow rates for different values of set flow rates	
10.	Limit switch-XYstage		Verify the functioning of home and far limit sensors of the XY stages	
11.	XY stage		Travel length > /=spec.	
12.	Halogen lamp intensity		Verify the functioning of the intensity control knob of the halogen lamp	
14.	Door safety lock		Verify the functioning of the high voltage interlock, by opening the door of the hood when the power supply is on	
15.	High voltage test		30KV.	
16.	Electro spinning		Test with proper solution.	
17.	Coaxial spinneret		Verify the functioning of co-axial spinneret by connecting it to the syringe pump and dispensing	

HOLMARC OPTO-MECHATRONICS (P) LTD.
COCHIN
JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on
f t YouTube



CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



			solution through each of its needles					
18.	Temperature controller and sensor		1 % error max.					
19.	Flow rate		Sl. No.	Set(ml/min)	Measured(ml/min)	Error (%)	Permissible Error (%)	
			1					
			2					
			3					
20.	Volume		1					
			2					
			3					

Checked by

.....

Approved by

.....

JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name :Spin coater

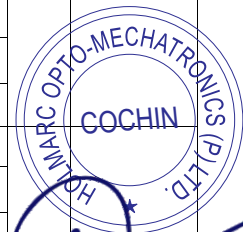
Date:

Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure:

Sl No	Specific Test Conducted	Test Result	Specification/ Accepted values	Pass /Fail	Remarks
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters		
2.	Vacuum checking		Place the substrate and run at maximum RPM		
3.	Vibration and noise checking		Run at high rpm and observe noise /vibration		
4.	RPM testing using Tachometer		1 % error maximum for all rpm		
			60 rpm		
			200 rpm		
			1000 rpm		
			2000 rpm		
			3000 rpm		
			4000 rpm		
			5000 rpm		
			7000 rpm		
			9000 rpm		
			10000 rpm		
5.	Acceleration testing By using a Tachometer		10 rpm / sec -10 sec - 100 rpm		
			50 rpm/sec-10 sec- 500 rpm		
			100 rpm/sec-10 sec- 1000 rpm		
			250 rpm/sec-10 sec- 2500 rpm		
			500 rpm/sec-10 sec- 5000 rpm		
			2000 rpm/sec-5 sec- 10000 rpm		



JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on





CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015
HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



6.	Keyboard/ Touch screen checking		Enter all the alpha numeric values and check its functioning		
7.	Test multi-step sample program		Verify the speed, acceleration and duration at each step.		
8.	Duration test		Run a sample program with below durations between the steps		
			5 sec		
			100 sec		
			1000 sec		
9.	Lid switch testing		Machine stops working if we open lid while running (Also run a program by opening the lid)		
10.	UV led testing		By running a sample program check the UV led lighting		
11.	Accessories checking		AC cord, vacuum pump, Drain hose ,touch pen , user manual, software CD etc		

Checked by

.....

Approved by

.....



JOLLY CYRIAC
Managing Director

Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on
f t YouTube



CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015

HOLMARCO
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



QA/Test Report

Equipment name : Spray Pyrolysis Equipment

Date:

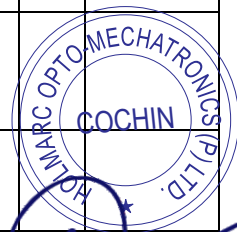
Model No./ Serial no. :

Customer/Job card No.

Standard Test Procedure: (

All the tests are performed based on the theory of the respective experiment and/or by calibrated instruments.)

Sl No	Specific Test Conducted	Test Result	Specification/ Accepted values	Pass /Fail	Remarks
1.	Basic Inspection		Model No., Painting , Finishing , stability and other visual parameters		
2.	Vibration and noise checking		Run a sample program and check		
3.	Functioning of home and far limit sensors of the XY stage.		Run to Home and far position and it will stop automatically.		
4.	Speed and travel of the XY stage		Max. 1 % error for all speeds		
5.	Functioning of home and far limit sensors of the dispenser		Operate the dispenser throughout its travel range in 'load' and 'drain' mode.		
6.	Exhaust fan and the chamber light		Switch on the Exhaust fan and chamber and check working.		
7.	Check the voltage at solenoid valves input		Voltage 0.1 % Error		
8.	Compressor pressure		Verify that the compressor cuts off at the set pressure level		
9.	Connectivity		RS232/USB cable		
10.	Flow rate		1 % error max.		
11.	Flow switch		Verify the functioning of the flow switch at various modes like load, drain and spray		



JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

Connect with us on






CIN : U33125KL1993PTC006984
GST No: 32AAACH9492C1ZQ

ISO 9001:2015
HOLMARC
OPTO-MECHATRONICS PVT.LTD

B-7., H.M.T. Industrial Estate, H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.
Email : sales@holmarc.com, PH : 91-484-2540075



12.	Flow test		Load water from a beaker to the container, drain it and check for continuous flow		
13	Flow rate and Speed		Operate the instrument using different sample programs of different flow rates and speed.		
14	Spray quality		Verify the quality of spray varying the pressure level		
15	Nozzle test		Test all the three types of nozzles - regular, syringe pump and ultrasonic types		
16	Ultrasonic nozzle		Ensure that the ultrasonic nozzle power supply is not heating up excessively during operation.		
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).		
18.	Temperature controller and sensor		Auto-tune the controller at 300 Degree Celsius set point		
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		
20.	Temperature controller and sensor		. Compare the displayed temperature with the external sensor display at different set points		
21.	Hot plate		Check continuous functioning of the hot plate for one hour		


COCHIN
HOLMARC OPTO-MECHATRONICS (P) LTD.

Checked by

.....

Approved by

.....

JOLLY CYRIAC
Managing Director



Mailing Address
B-7., H.M.T. Industrial Estate,
H.M.T. PO, Kalamassery
Kochi - 683 503 Kerala, India.



E-mail Contact
sales@holmarc.com



Phone Contact
Tel: 91-484-2540075



www.holmarc.com

Business Hours
Monday to Saturday: 9:00am - 5:00pm

