

PHYSIC RESEARCH LABORATORY





Fluorescence Spectrophotometer
F-7100

HITACHI
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F-7100

● SPECIFICATIONS


ITEM	DESCRIPTION
Sensitivity (Raman light of water)	Noise: Background S/N 20,000 or above ^{*6} Noise: Peak 1,200 or above ^{*7}
Minimum sample volume	0.6 mL (in use of standard 10 mm rectangular cell) ^{*8}
Photometric principle	Monochromatic light monitoring ratio calculation
Light source	150 W xenon lamp, self-deozone lamp house
Monochromator	Stigmatic concave diffraction grating: 900 lines/mm, F2.2 Braze wavelength: Excitation side 300 nm, emission side 400 nm
Measuring wavelength range (on both EX and EM)	200 to 750 nm, and zero-order light (Expandable up to 900 nm with optional detector)
Bandpass	Excitation side: 1, 2.5, 5, 10, 20 nm Emission side: 1, 2.5, 5, 10, 20 nm
Resolution	1.0 nm (at 546.1 nm)
Wavelength accuracy	±1 nm
Wavelength scan speed	30, 60, 240, 1,200, 2,400, 12,000, 30,000, 60,000 nm/min
Wavelength drive speed	60,000 nm/min
3D measurement time	3 min ^{*9}
Response	Response from 0 to 98 %: 0.002, 0.004, 0.01, 0.05, 0.1, 0.5, 2, 4 s
Photometric value range	-9999 to 9999
Dimensions/weight	Spectrophotometer: 620 W × 520 D × 300 H mm (excluding protrusions)/41 kg
Working temperature /humidity	15 to 35 °C, 25 to 80 % (condensation not allowed, 70 % or less at 30 °C or higher)
Power consumption (spectrophotometer)	100, 115, 220, 230, 240 V AC, 50/60 Hz, 380 VA
FL Solutions program	Standard software
Data processing unit	PC: Windows
Printer	Printer compatible with Windows

*6 EX 350 nm, Slit 10 nm, Response 4 s

*7 EX 350 nm, Slit 5 nm, Response 2 s

*8 Does not require cell spacer; no slit restriction

*9 EX 200 to 750 nm, Sampling interval 10 nm
EM 200 to 750 nm, Sampling interval 10 nm

 labeled model is available

● FUNCTIONS

ITEM	DESCRIPTION	
3-dimensional measurement	Contour plotting (fluorescence/phosphorescence), bird's eye view	
	Readout of EX/EM spectra from contour	
	Peak detection	
	Calculation between files (+, -, ×, ÷)	
Wavelength scan	Fluorescence/phosphorescence/luminescence spectra	
	Synchronous spectra/repetitive measurement/CAT	
	Excitation spectrum correction (200 to 600 nm)	
	Emission spectrum correction (200 to 600 nm)	
	Excitation longer wavelength spectrum correction (500 to 800 nm)	
	Emission longer wavelength spectrum correction (500 to 800 nm)	
	Note: Sub standard light source (option) is necessary. Tracing, scale conversion, graph axis conversion Smoothing Calculation between files (+, -, ×, ÷) Differentiation (first to fourth order)	
3-dimensional time scan measurement	Contour plotting (fluorescence/phosphorescence), bird's eye view	
	Readout of time scan/EM spectra from contour	
	Peak detection Calculation between files (+, -, ×, ÷)	
Time scan measurement mode	Time scan fluorescence/phosphorescence measurement mode (minimum data interval 1.0 ms)	
	Phosphorescence attenuation curve measurement	
	Rate calculation	
	Tracing, scale conversion, graph axis conversion Smoothing Calculation between files (+, -, ×, ÷) Differentiation (first to fourth order) Area calculation	
	Photometry mode	Quantitative analysis (fluorescence/phosphorescence/luminescence)
		Two/three-wavelength calculation
Calibration curve (linear, quadratic, cubic, polygonal), factor enterable		
Peak ratio, peak area, quantization via differentiation		
Interruption, sample blank measurement, data deletion		
Calibration curve data correction, calibration curve tracing		
Cumulative data averaging Statistic calculation		
Others	Automatic sensitivity measurement function Pre-scan Data transport and graph copying to Microsoft Excel Print preview function FL Intensity Standardization File conversion of 3D Scan Data	

NOTES 1. A PC set is not supplied as standard equipment. It should be prepared separately.



Science for
a better tomorrow

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CAUTION: For correct operation, follow the instruction manual when using the instrument.

Specifications in this catalog are subject to change with or without notice, as Hitachi High-Tech Science Corporation continues to develop the latest technologies and products for its customers.

NOTICE: The system is For Research Use Only, and is not intended for any animal or human therapeutic or diagnostic use.

These data are an example of measurement; the individual values cannot be guaranteed.

 Hitachi High-Tech Science Corporation

www.hitachi-hightech.com/global/hhs/

Head Office

24-14, Nishi-Shimbashi 1-chome, Minato-ku, Tokyo 105-0003, Japan





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TAX INVOICE

Invoice To: Principal, Anand Niketan College. Run by Maharogi Sewa samiti – Warora. Anandwan Warora, Chandrapur, Maharashtra, India - 442914	Bill No. : STS/21-22/164
	Date : 28-March-2022
	PO No. : Mail Confirmation
	Date : 10/03/2022
GST No : 27AAATM2248N1ZA	
State & Code: Maharashtra & 27.	

Deliver To: (Same as above)	Transportation Mode :
	Reverse Charge :

Sr. No.	Description & SAC Code	Qty	Unit Price	Disc. %	Total Price
01.	F-7100 Hitachi Fluorescence Spectrophotometer. (Wavelength range 200-900 nm) HSN Code: 9027	01	9,00,000.00	-	9,00,000.00
Total Taxable Amount					9,00,000.00
CGST @9%					81,000.00
SGST@9%					81,000.00
Total Rounded Invoice Amount					10,62,000.00
GST Payable on Reverse Charge					0.00

Total Amount in Words: Rupees Ten Lakh Sixty Two Thousand Only.

GST No.: 27AKYPK1291R1Z2 PAN NO : AKYPK1291R. MSME (SSI): 27 024 1200773 PART-II Goods once sold cannot be taken back. SUBJECT TO PANVEL JURISDICTION	For Scientific Technology Solutions,  Authorized Signatory.
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Kalpshree, Plot B-2, Sector-7, Khanda Colony, New Panvel (W) 410206.

Ph.:022-27464417, Fax: 022-27455333, Email:sci_tec_sol@yahoo.co.in

www.scientificttechnology.in

Apparatus received in good condition & installed also.

15-7-22

Head
Department Of Physics
Anand Niketan College
Anandwan.



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TAX INVOICE

Invoice To: Principal, Anand Niketan College. Run by Maharogi Sewa samiti – Warora. Anandwan Warora, Chandrapur, Maharashtra, India - 442914	Bill No. : STS/21-22/167
	Date : 29-March-2022
	PO No. : Mail Confirmation
	Date : 10/03/2022
GST No : 27AAATM2248N1ZA	
State & Code : Maharashtra & 27.	

Deliver To: (Same as above)	Transportation Mode :
	Reverse Charge :

Sr. No.	Description & SAC Code	Qty	Unit Price	Disc. %	Total Price
01.	Solid Sample Cell Holder.	01	3,30,000.00	-	3,30,000.00
02.	Fluorescence quartz cuvette.	02	15,000.00	-	30,000.00
HSN Code: 9027					
Total Taxable Amount					3,60,000.00
CGST @9%					32,400.00
SGST@9%					32,400.00
Total Rounded Invoice Amount					4,24,800.00
GST Payable on Reverse Charge					0.00

Total Amount in Words: Rupees Four Lakh Twenty Four Thousand Eight Hundred Only.

GST No.: 27AKYPK1291R1Z2
PAN NO : AKYPK1291R.
MSME (SSI):27 024 1200773 PART-II
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Head
Department Of Physics
Anand Niketan College



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TAX INVOICE

Invoice To: Principal, Anand Niketan College. Run by Maharogi Sewa samiti – Warora. Anandwan Warora, Chandrapur, Maharashtra, India - 442914	Bill No. : STB/21-22/100 Date : 30-March-2022 PO No. : Mail Confirmation Date : 10/03/2022
GST No : 27AAATM2248N1ZA	
State & Code: Maharashtra & 27.	

Deliver To: (Same as above)	Transportation Mode : Reverse Charge
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Sr. No.	Description & SAC Code	Qty	Unit Price	Disc. %	Total Price
01.	Software for F-7100 – Hitachi Fluorescence Spectrophotometer. HSN Code: 9027	01	2,10,678.00	-	2,10,678.00
Total Taxable Amount					2,10,678.00
CGST @9%					18,961.02
SGST @9%					18,961.02
Total Rounded Invoice Amount					2,48,600.00
GST Payable on Reverse Charge					0.00

Total Amount in Words: Rupees Two Lakh Forty Eight Thousand Six Hundred Only.

GST No.: 27AKYPK1291R1Z2
PAN NO : AKYPK1291R.
MSME (SSI)-27 024 1200773 PART-II
 Goods once sold cannot be taken back.
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For Scientific Technology Solutions,

(Signature)
 Authorised Signatory

Kalpshree, Plot B-2, Sector-7, Khanda Colony, New Panvel (W) 410206.
 Ph: 022-27464417, Fax: 022-27455333, Email: sci_sol@scientific.com
www.scientechnology.in

Invoice received on 10/03/2022

Head
 Department of Program
 Anand Niketan College





ANAND NIKETAN COLLEGE,
ANANDWAN, WARORA
OF SCIENCE & TECHNOLOGY (1984-1987)

Antoine Lavoisier (1743-1794) was a French chemist and physicist who demonstrated that mass is conserved in chemical reactions. He is considered one of the fathers of modern chemistry. He discovered the law of conservation of mass and the law of definite proportions. He also discovered the composition of water and the role of oxygen in combustion.

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Anand Niketan College, Anandwan, (Warora)
Antoine Lauren Lavoisier
(1743-1794)

Antoine - Laurent Lavoisier (1743 -1794) french chemist considered by many as the father of modern chemistry is known for his role in the dismantling of the phlogiston theory of combustion.

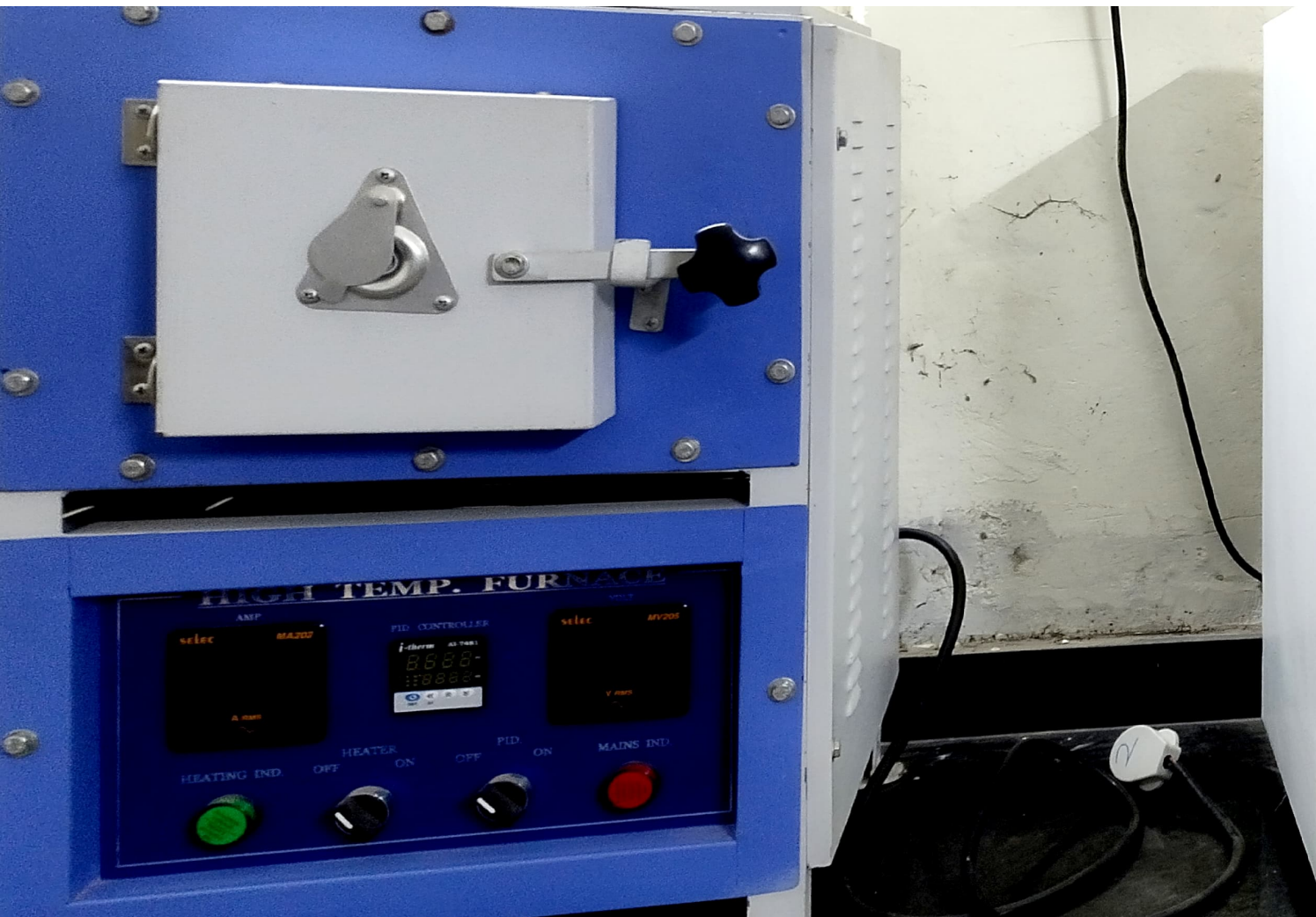
> Lavoisier's experiment was a gas that extinguished flames and we now call it oxygen. Lavoisier discovered the law of conservation of mass and the chemical composition of the air.

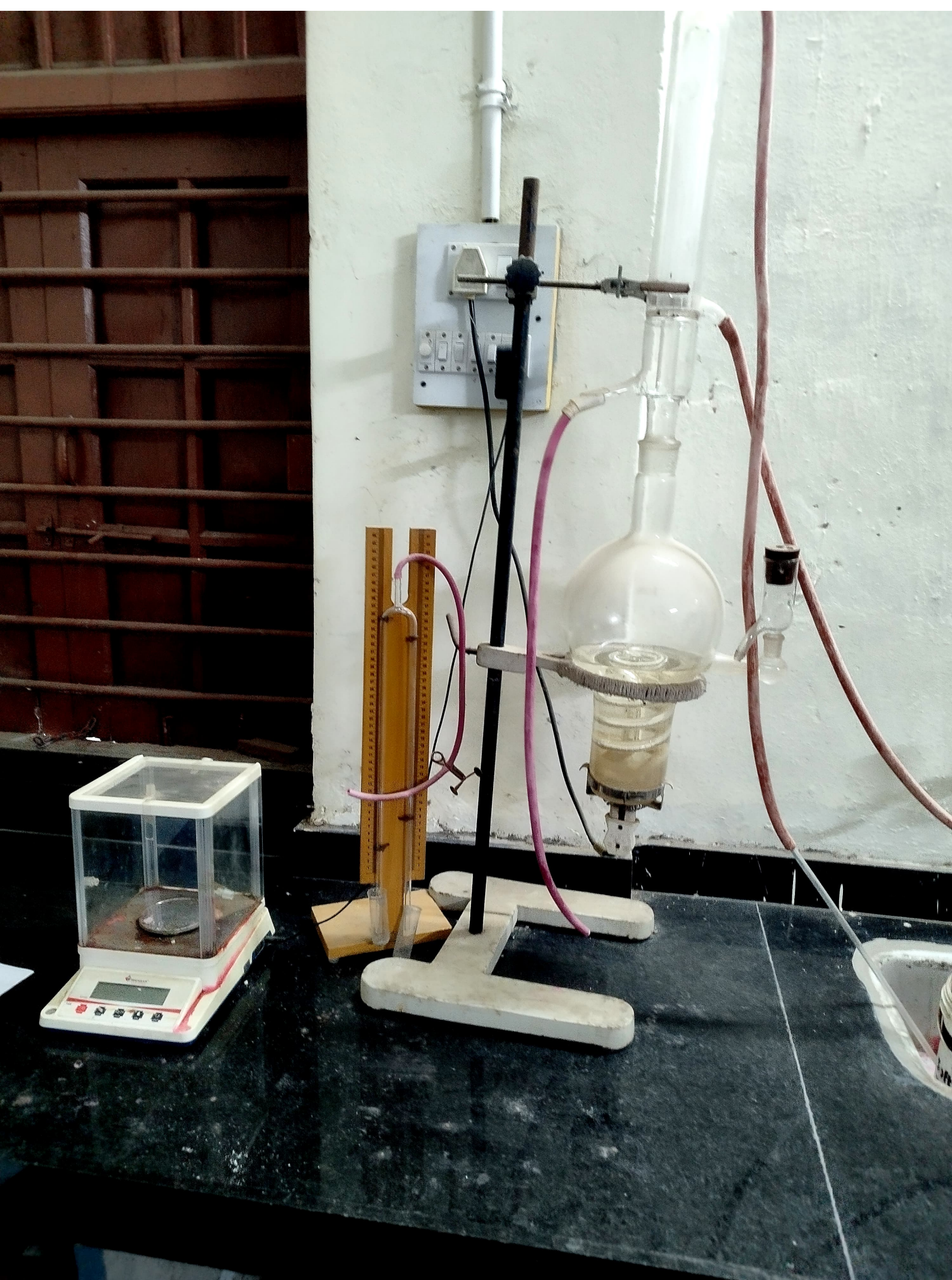
> In his time, scientist believed that thing burned because they contained something called phlogiston, and that metals were composed of calx and phlogiston.

> The fact that metal gained weight during combustion was explained by the fact that the phlogiston itself during combustion a negative weight, a phlogiston, was released.

Portrait of Antoine Lavoisier (1743-1794)
1) Lavoisier 2) Laplace 3) Berthollet 4) Dalton 5) Proust 6) Berzelius







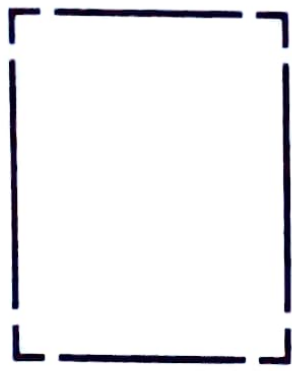




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AN / HEHEK / 2015/15/15

REMI CIS-24 PLUS



Received 4/1/2019

||SHREE GANESHAY NAMAH||
GST INVOICE/CREDIT

MSC

MAGNET TRADERS

Original for Buyer

49, CENTRAL BAZAR ROAD, BAJAJ NAGAR,
NAGPUR-440010
E-Mail : magnettraders22@gmail.com
Phone : 9960764196

Buyer Name
M S PRINCIPAL, ANAND NIKETAN COLLEGE
ANANDWAN, WARORA, DIST. CHANDRAPUR
WARORA (M S) State : 27

GSTIN : 27CKKPS1658E1ZU

Invoice No MT/19-20/449 Date : 29-01-2020
Challan no. : 417 Date : 29-01-2020
Ref no. ANC/ADMN/2019/526 Date 29-01-2020
Delivery Through
Transport :

PHONE NO : 07173282006
GSTIN 27AAATM2248N1ZA

Sr.	PRODUCT	HSN CODE	SGST%	CGST%	QTY.	UNIT	RATE	DIS%	AMOUNT
1	ORBITAL SHAKING INCUBATOR WITH CLAMPS MODEL NO CIS-24 PLUS LCD REMI MAKE	150 8419	9.00	9.00	1	NOS	200000.00	0.00	200000.00
2	SERVO STABILIZER FOR ORBITAL SHAKER MODEL NO. VS-02 MAKE REMI	151 8504	9.00	9.00	1	NOS	13200.00	0.00	13200.00

Reviewing in good working conditions

29/1/2020
Head

Department Of Chemistry
Anand Niketan College, Anandwan
Warora, Dist. - Chandrapur

Atul

DR. M. C. KALE
PRINCIPAL
ANAND NIKETAN COLLEGE
ANANDWAN, WARORA

Recd by RTGS - 10/2/2020 CB No. 120.

Total Quantity	Class	SGST		CGST		GROSS AMOUNT	
		GST %	Taxable Amt	Tax Amt	Taxable Amt	Tax Amt	
2	5.00%	0.00	0.00	0.00	0.00	213200.00	213200.00
	12.00%	0.00	0.00	0.00	0.00		0.00
	18.00%	213200.00	19188.00	213200.00	19188.00		19188.00
	28.00%	0.00	0.00	0.00	0.00		0.00
						DISCOUNT	0.00
						SGST Value	19188.00
						CGST Value	19188.00
						CR/DR NOTE	0.00
						Add	0.00
						ROUND OFF	0.00
Rs Two Lakh Fifty One Thousand Five Hundred Seventy Six Only						GRAND TOTAL	251576.00

Re mark ANC/ADMN/2019/526

Terms & Conditions
1. Goods once sold will not be taken back. 2. And cheque.
3. Car responsibility of goods ceases on delivery.

Declaration
I hereby declare that this invoice shows actual price of the goods described and that all particulars are true and correct and no commission in this invoice shall be Subject to Nagpur Jurisdiction

Company's Bank Details
SYNDICATE BANK, LAW COLLEGE SQUARE NAGPUR
A/C NO.: 5250140000605
IFSC CODE : SYNB0005250

For MAGNET TRADERS
Atul
NAGPUR
Authorised signatory