Phone: +91-0171-2643080, 2601773
Email : sales@naugraexport.com

Product Name :	**Product Code :**
Franck-Hertz Experiment for Physics Lab for High School Science Kits Lab	HS-LAB0004

Description :

Franck-Hertz Experiment for Physics Lab for High School Science Kits Lab

Technical Specification :

Franck-Hertz Experiment for Physics Lab - We are offering Franck-Hertz Experiment useful in Physics and Material Science Lab. This experiment verifies that:
It is possible to excite atoms by low energy electron bombardment.
The energy transferred from electrons to the atoms always had discrete values.
The values so obtained for the energy levels were in agreement with spectroscopic results.
Thus the existence of atomic energy levels put forward by Bohr can be proved directly. It is a very important experiment and can be performed in any college or University level laboratory.
The Experiment is consists of the following:
Argon filled tetrode
Filament Power Supply: 3.6-3.4V continuously variable
Power Supply for VG1K: 1.3-5V continuously variable
Power Supply for VG2A: 1.3 - 12V continuously variable
Power Supply for VG2K: 0 - 95V continuously variable
Saw tooth waveform for CRO display Scanning Voltage : 0-80V
Scanning Frequency : 115±20 Hz

Multirange Digital Ammeter Display : 3½ digit, LED
Range : 10-7, 10-8 & 10-9 A
The instrument can, not only lead to a plot of the amplitude spectrum curve by means of point by point measurement, but also directly display the amplitude spectrum curve on the oscilloscope screen. This instrument can thus be used as a classroom experiment as well as for demonstration to a group of students.
Analysis of Data:
Data obtained for the excitation potential point by point are shown in Fig. 3. The readings are taken for 1V changes on grid 2 (VG2K). A significant decrease in electron (collector) current is noticed every time the potential on grid 2 is increased by approximately 12V, thereby indicating that energy is transferred from the beam in (bundles) "quanta" of 12eV only. Indeed, a prominent line in the spectrum of argon exists at 1048Å corresponding to eV=11.83.
Frank-Hertz Experiment Set-up, Model: consists of the following:
Argon filled tetrode
Filament Power Supply : 2.6-3.4V continuously variable
Power Supply for VG1K : 1.3-5V continuously variable
Power Supply for VG2A : 1.3 - 12V continuously variable
Power Supply for VG2K : 0 - 95V continuously variable
All the power supplies are highly stabilised and output voltages can be read on 31/2 digit, 7 segment LED DPM with autopolarity and decimal indication through a selector switch.
Saw tooth waveform for CRO display
Scanning Voltage : 0-80V
Scanning Frequency : 115±20Hz
Multirange Analogue Voltmeter
Range : 0-5V, 0-15V & 0-100V
Multirange Digital Ammeter
Display : 31/2 digit 7 segment LED
Range Multiplier : 10-7, 10-8, 10-9
Power : 220V±10% mains, 50Hz.