



**BIOMEDICAL RESEARCH AND INNOVATION CENTER [BRIC-MIST]
MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY**

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Sample Test Report

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Serial No BME-00101	Lab Name Biochemistry Lab, BME Dept., MIST	Report Delivery Date 27 May 2026
Name of the Client	Department of Applied Chemistry and Chemical Engineering (ACCE), BSMRSTU, Bangladesh	Test Performance Date 16 May 2026
Contact Person (Name & Designation)	Biprodab Mogumdar Researcher	Sample Receiving Date 06 May 2026
Address of the Clients (Including Tel, Fax, Email)	Department of Applied Chemistry and Chemical Engineering (ACCE), BSMRSTU, Bangladesh Phone: +8801804193985, E-mail: biprodabbsmrstu@gmail.com	
Product	Fly Killing Liquid Sample	
Product Description (composition)	Corn Syrup, Refined Sugar, Apple Cider Vinegar, Chrysanthemum Extract, Clove Oil, Peppermint Oil, Cinnamon Oil, Boric Acid, Neem Extract, Fruit extracts, Yeast	
User Sample ID	MSQ-003	

S/N	Test Type	Method/ Instrument	Compounds	Rmks
01	Chemical Compound Analysis	FTIR	Water	
			Sugars, Acetic Acid,	
			Essential Oils, Neem Extract	
			Esters in oils and extracts	
			Aromatic Rings (Clove/Cinnamon Oil, Chrysanthemum), Amides	
			Boric Acid	


Test Conducted by:
Md. Tobibul Islam
Lecturer
Dept of Biomedical Engineering
Military Institute of Science and Technology (MIST)
Mirpur Cantonment, Dhaka-1216


Test Supervised by:
Lt Col Md Marul Hasan, PhD
Secretary, CATS-MIST (BME)
BME Dept, MIST




Countersigned by:

Colonel Mohammad Sharif Islam, psc
Director, CATS-MIST (BME)
BME Dept, MIST

Note:

- The result reported here pertains only to the sample received in the laboratory.
- The precision & accuracy are defined only for the laboratory process.
- The result should not be reproduced partly or fully without prior approval of the laboratory.

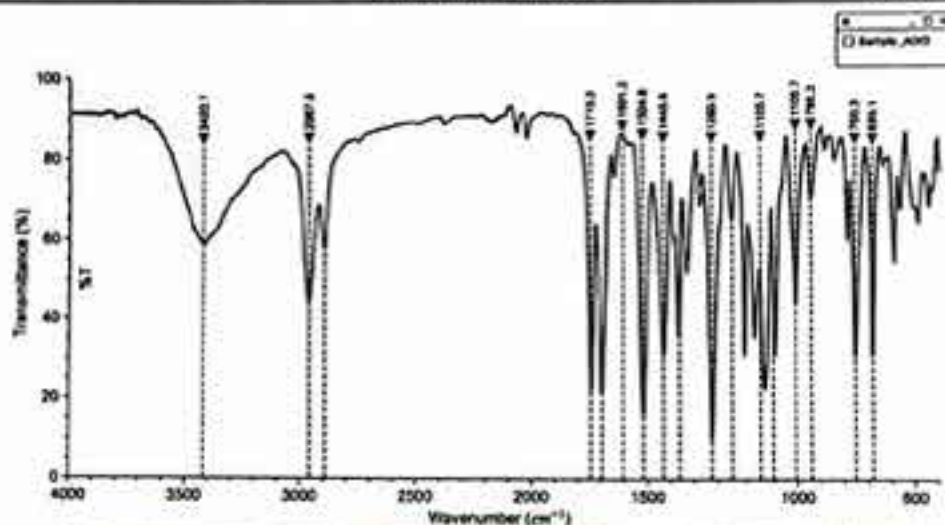


Figure 1: FTIR spectra curve

Table 1: Analysis of the peak location and shape of the IR bands of the main chemical functional groups of the test sample from FTIR spectra curve

Functional Group	Wavenumber (cm ⁻¹)	Intensity / Shape
O-H (Hydroxyl)	3300 - 3400	Strong, broad
C-H (Aliphatic)	2900 - 2950	Medium
C-O (Ether)	1000 - 1150	Strong
O-H (Phenol)	3500 - 3200	Strong, broad
C-H (Aromatic)	3070	Weak
C=C (Aromatic Ring)	1600, 1510	Medium to strong
C-O (Phenolic)	1270 - 1200	Strong
O-H (Hydroxyl)	3200	Broad
B-O (Asymmetric stretch)	1400-1450	Strong
B-OH (Bending)	1190	Medium



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