

Table 1. Elemental analysis of Mt and OrganoMt

Element	Mt		Organo Mt	
	Weight%	Atomic%	Weight %	Atomic %
Fe	05.68	01.99	3.90	1.29
Mg	02.39	01.93	1.08	0.82
C	00.00	00.00	11.25	17.32
O	60.30	73.73	50.61	58.50
Al	11.40	08.26	8.56	5.870
Si	20.23	14.09	24.6	16.2
Total	100.00	100.00	100.00	100.00

Batch extraction method

Initially a stock solution of VF, 1000 µg ml⁻¹, was prepared. 5 ml of this solution containing 5000 µg of drug was taken in a 100ml volumetric flask containing 100mg of Organo Mt. Then solution was maintained at different pH in the range 1-9 maintaining the volume to 25 ml. The resulting dispersion was put on continuous mechanical shaking (Khera instruments) for 1 h. The dispersion was centrifuged at 25,000 rpm for 30 minutes at room temperature (Sigma centrifuge). The free VF concentration in the supernatant was determined using UV-visible spectrophotometer (Analytic Jena) from the Lambert-Beer's plot and the percentage of the drug loaded was calculated using Equation 2

$$\phi = \frac{C_i - C_e}{C_i} \dots\dots\dots \text{Equation 1}$$

Where C_i is the initial drug concentration (mg L⁻¹) and C_e is the concentration of the drug (mg L⁻¹) in the supernatant at the equilibrium stage. The amount of drug adsorbed q_e (mg g⁻¹) was calculated via the mass-balance relationship as per Equation 2

$$q_e = (C_i - C_e) \frac{V}{m} \dots\dots\dots \text{Equation 2}$$

25 Where V (L) is the volume of the reaction media and m is the mass of Organo Mt (g) used for the
26 studies.

27 **Table 2. Elemental analysis of Organo Mt and Organo Mt-VF complexes**

Element	Organo Mt		Organo Mt-VF complex 1		Organo Mt-VF complex 2	
	Weight%	Atomic%	Weight %	Atomic %	Weight %	Atomic %
C	11.25	17.32	24.49	36.03	6.22	10.86
O	50.61	58.5	32.77	36.19	33.54	44.02
Mg	01.08	0.82	00.00	00.00	00.00	00.00
Al	08.56	05.87	8.69	5.69	2.43	1.89
Si	24.60	16.2	31.31	19.70	57.30	42.83
Fe	03.90	1.29	00.00	00.00	00.00	00.00
N	00.00	00.00	01.34	01.68	0.10	0.14
Cl	00.00	00.00	01.40	0.70	0.42	0.25
Total	100.00	100.00	100.00	100.00	100.00	100.00