Hydraulic cell permeability test

Location	Job ref.	
	Borehole/Pit no.	
Soil description	Sample No.	
	Depth	m
	Date	

Test method BS1377: Part 6: 1990 : **4.8.3,4.8.4**

Flow conditions*:vertical - upwards/downwards.Horizontal/outwards

TEST SPECIMEN

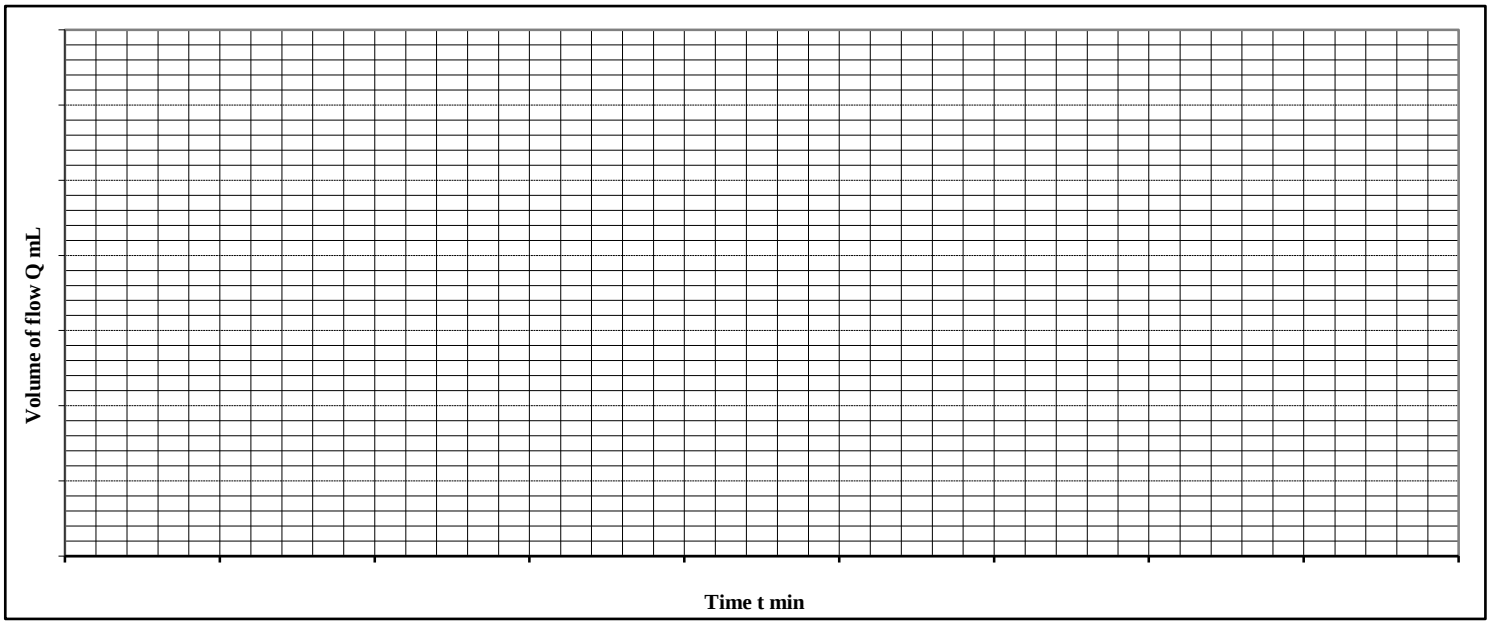
Diameter	mm		Nominal effective stree	σ_v' kPa	
Area	mm		Diaphragm pressure	p_d kPa	
Length	mm		Pressure on specimen	σ kPa	
Density	p Mg/m^3		Back pressure	p_2 kPa	
Moisture Content	%		Pressure differnce required	$(p_1 - p_2)$ kPa	
Dry Density	p Mg/m^3		Inlet pressure	p_1 kPa	
Method of saturation			Mean effective stress $\sigma' = \sigma - 1/2(p1 - p2)$	kPa	
Final B value			Hydraulic gradient		

FLOW READINGS

Clock time	Elapsed Time t min	Volume change indicator: inlet reading	inlet difference Q_1 mL	outlet reading	outlet difference Q_2 mL	Test temperature / Correction factor R_t / Remarks	
	0		0		0		

Operator	Checked	Approved

Form 6G



From graph, mean slope q = ml/min

Corresponding pressure correction p_c = kPa

CALCULATIONS

Vertical flow* $k_v = \frac{1.63\ q\ L\ R_t}{A((p_1 - p_2) - p_c)} * 10^{-4}$ m/s

Horizontal flow* $k_H = \frac{0.26\ q\ Rt}{L((p_1 - p_2) - p_c)} * \log_e(D/d) * 10^{-4}$ m/s

Accepted permeability m/s

Operator	Checked	Approved

Form 6G2