GENERAL TESTING PROCEDURE

Title: Perchloric Acid 0.1 M

SOP No.:		**Department :**	QC
Effective Date :		**Review Date :**	
Revision No.:	00	**Page No.:**	1 of 3
Supersede SOP No.:	Nil		

1.0 OBJECTIVE:

1.1 To lay down a procedure for the preparation and standardisation of 0.1 M Perchloric acid.

2.0 SCOPE:

2.1 It is applicable for the estimation of Raw material, bulk product, intermediate product and finish products**.**

3.0 RESPONSIBILITY:

3.1 Analyst / Officer / Executive follow the procedure.

3.2 Head-QC are responsible for effective implementation of this SOP.

4.0 REFERENCE:

4.1 BP

5.0 DEFINITION:

5.1 Molarity is the number of mole of substance that are present in the given Volume of the solution.

6.0 PROCEDURE:

6.1 Material and Equipment:

6.1.1 Volumetric flask 1000 ml, 25 ml pipette, 10 ml pipette, Perchloric acid 70% or 60%, Glacial acetic acid, Acetic anhydride, Potassium hydrogen phthalate, conical flask, record book etc.

6.2 Preparation:

6.2.1 Place 8.5 mL of perchloric acid in a volumetric flask containing about 900 mL of glacial acetic acid and mix. Add 30 mL of acetic anhydride, dilute to 1000.0 mL with glacial acetic acid, mix and allow to stand for 24 h. Determine the water content without addition of methanol and, if necessary, adjust the water content to 0.1-0.2 per cent by adding either acetic anhydride or water. Allow to stand for 24 h.

6.3 Standardisation:

6.3.1 Weigh accurately about 0.17 g of Potassium hydrogen phthalate, previously powdered lightly and dried at 110° for 1 hours and dissolve it in 50 ml of anhydrous acetic acid. Worming gently if necessary. Allow to cool protected from air Add 0.1 ml of crystal violet solution and titrate with the Perchloric acid solution until the violet colour changes to emerald-green., warming

Each ml of 0.1 M Perchloric acid is equivalent to 0.02042 g of $C_8H_5KO_4$.

6.4 Calculation:

$$\text{Molarity (M)} = \frac{\text{Weight of primary std in gm X 0.1M X Potency of Primary std.}}{\text{Consume vol. X 0.02042 gm X 100}}$$

7.0 Annexures:

7.1 Annexure-I : Molarity Calculation format of Volumetric Solution 0.1 M Perchloric acid.

8.0 Distribution:

8.1 Display copy 1: Instrument Lab

9.0 Abbreviation:

SOP : Standard Operating Procedure

QC : Quality Control laboratories

10.0 Revision History:

10.1 Revision history table:

Document Number	CC Number/Date	Brief Description of Change

ANNEXURE-I

Molarity Calculation format of Volumetric Solution 0.1 M Perchloric Acid

S. No.	Date	Qty. Prep.	Batch no.	Primary Std. ID. No.	Primary Std. Weight	Calculation	RSD NMT 0.2%	Mean Molarity	Date of Standardization.
1.									
2.									
3.									

Prepared By (Sign/Date):

Checked By (Sign/Date):