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## *Titration Method to Determine Concentration of VpCI-369*

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**Purpose:** To determine the concentration of VpCI-369 by titration method.

**Method:** ASTM D-974  
(Standard Test Method for Acid and Base Number by Color-Indicator Titration)

**Materials:** VpCI-369  
Mineral Spirits  
Isopropyl Alcohol  
Caustic Potash  
Toluene, lab grade  
Barium Hydroxide (CAS # 17194-00-2)  
p-Naphtholbenzein, Indicator grade (CAS # 145-50-6)

**Procedure:** 1) The following solutions were prepared according to ASTM D-974:  
- Titration solvent (500ml toluene + 5ml water + 495ml Isopropyl Alcohol)  
- 1% p-Naphtholbenzein indicator in titration solvent.  
- 0.1M KOH in Isopropyl Alcohol with 2g/L. barium hydroxide.  
2) To determine the acid/base number, refer to parts 9 and 10 of ASTM D-974.

**Results:** When the 1% p-Naphtholbenzein indicator solution was added to the titration solvent/sample of VpCI-369, the solution remained orange, which means that VpCI-369 has no base number

Sample	ml of 0.1M KOH	Acid Number (mg of KOH/g)
mineral spirits	0.1	0
1 part VpCI-369 + 9 parts mineral spirits	5.6	~1.51
3 part VpCI-369 + 17 parts mineral spirits	8.4	~2.33
1 part VpCI-369 + 4 parts mineral spirits	11.2	~3.09

**Interpretations:** The concentration of VpCI-369 can be determined using ASTM D-974.

