

## Method Abstract #102

### Total Base Number

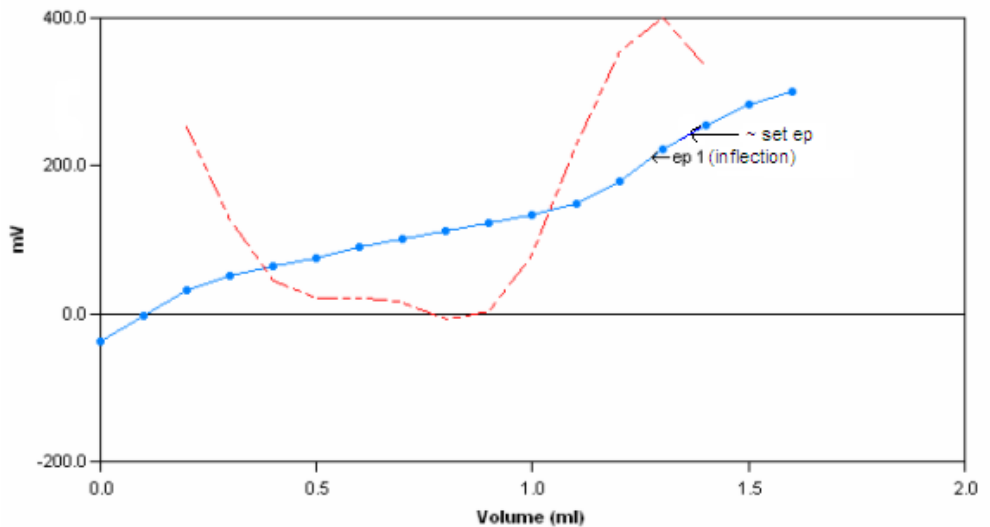
#### Scope and Application

This method conforms to ASTM D4739. It measures the quantity of basic components in an oil sample. It can be considered as a measure of the alkalinity of the oil, or of the oil's ability to neutralize acids produced during combustion.

#### Method Summary

TBN determination involves the addition of a tri-solvent - made from equal parts of chloroform, toluene and 2-propanol with a small amount of water - to an oil sample. Once dissolved, the sample is titrated with alcoholic hydrochloric acid to an inflection endpoint. A backup set endpoint at 240 mV is simultaneously calculated in the case of a weak inflection.

#### Sample Titration Curve



#### Method Performance

Parameter	Specification
Measuring Range	0.7 – 70 mg KOH/g
RSD @ 0.7 mg KOH/g	3.04%
RSD @ 6.5 mg KOH/g	2.07%
RSD @ 10 mg KOH/g	1.09%
RSD @ 20 mg KOH/g	0.96%