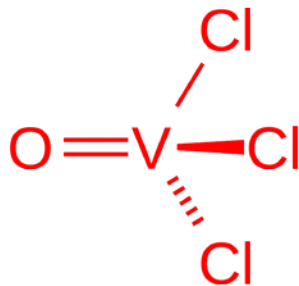


Measuring Vanadium Oxytrichloride

Applied Analytics Application Note No. AN-008



Application Summary

Analytes: VOCl_3 (vanadium oxytrichloride)

Detector: OMA-300 Process Analyzer

Introduction

Vanadium oxytrichloride (VOCl_3) is a chemical useful for catalyzing olefin polymerization, synthesizing organovanadium, and producing EPDM rubber, among other things.

A bright yellow liquid, VOCl_3 fumes when left in an open container and must be kept under a blanket of inert gas to prevent reactions with ambient moisture. VOCl_3 will hydrolyze upon contact with water vapor to form hydrochloric acid, vanadic acid, and VOCl_2 (solid). An additional concern is the toxicity of VOCl_3 and the health risks of unknowing exposure.

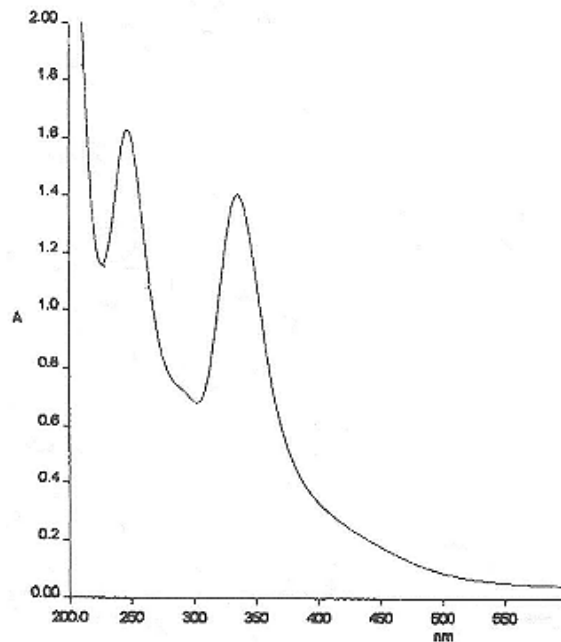
The OMA system continuously measures low concentrations of VOCl_3 in facilities that use or store this chemical in production processes. This removes the need for pulling samples back to the lab, instead providing real-time analysis of VOCl_3 concentrations at the site.

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Absorbance Curve of VOCl_3 in Process Gas

The OMA recognizes the distinctive absorbance curve of VOCl_3 in the sample:



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Further Reading

Subject	Location
OMA-300 Process Analyzer Data sheet	http://www.a-a-inc.com/documents/AA_DS001A_OMA300.pdf
Advantage of Collateral Data Technical Note	http://www.a-a-inc.com/documents/AA_TN-202_CollateralData.pdf
Multi-Component Analysis Technical Note	http://www.a-a-inc.com/documents/AA_TN-203_MultiComponentAnalysis.pdf



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