VA Application Note No. V - 104

Title:	**Formaldehyde in metalworking lubricants**

Summary:	Formaldehyde is determined polarographically at the DME in alkaline solution.

Sample:	metalworking lubricant
Sample preparation:	none

Analysis of formaldehyde

Electrolyte	c(LiOH) = 0.1 mol/L + c(EDTA) = 0.02 mol/L	
Measuring solution	10 mL electrolyte are degassed manually for 240 s. 100 µL sample are added. After additional 60 s degassing the determination is started.	
Auxiliary electrode (AE)	Pt	
Reference electrode (RE)	Ag/AgCl/KCl (3 mol/L)	
Parameters	Working electrode	DME
	Stirrer speed	2000 rpm
	Mode	DP
	Purge time	60 s
	Equilibration time	10 s
	Pulse amplitude	50 mV
	Start potential	-1400 mV
	End potential	-1850 mV
	Voltage step	8 mV
	Voltage step time	0.5 s
	Sweep rate	16 mV/s
	Peak potential formaldehyde	-1640 mV

Results:	formaldehyde
	172 mg/L

Determination of formaldehyde