

# VA Application Note No. V- 39

**Title:** Zinc, cadmium, lead and copper in whiskey after digestion

**Summary:** Determination of Zn, Cd, Pb and Cu in whiskey after UV digestion.

**Sample:** Whiskey 40% v/v

**Sample Preparation:** The alcohol is evaporated by heating with a Bunsen burner. Afterwards the solution is diluted with high purity water and digested with UV.

## Zinc, cadmium, lead and copper:

**Electrolyte:**  $\text{NH}_4\text{Ac}$  buffer, pH = 4.6

**AE:** Pt

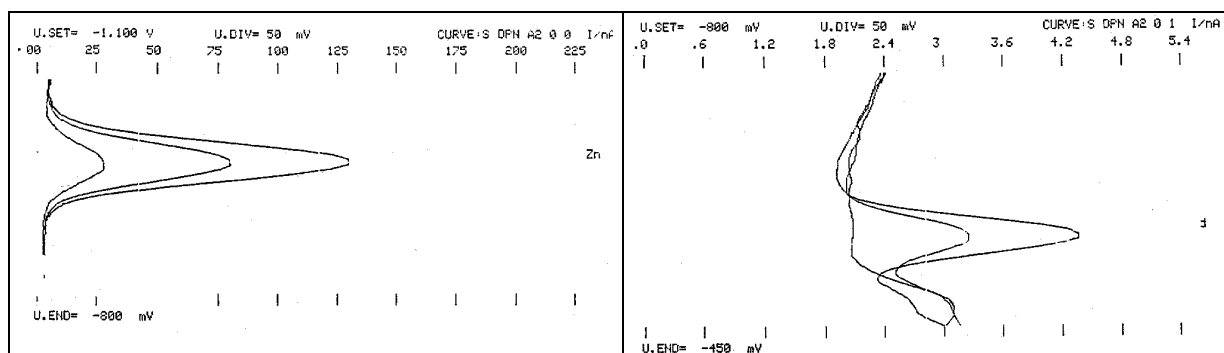
**RE:** Ag/AgCl/KCl 3M

**Parameters:** DPASV (+50 mV), HMDE  
 $U_{\text{meas}} = -1100 \text{ mV}$  (90s),  $U_{\text{start}} = -1100 \text{ mV}$ ,  $U_{\text{end}} = +100 \text{ mV}$   
 $E_p(\text{Zn}) = -960 \text{ mV}$ ,  $E_p(\text{Cd}) = -560 \text{ mV}$ ,  $E_p(\text{Pb}) = -360 \text{ mV}$ ,  
 $E_p(\text{Cu}) = -50 \text{ mV}$

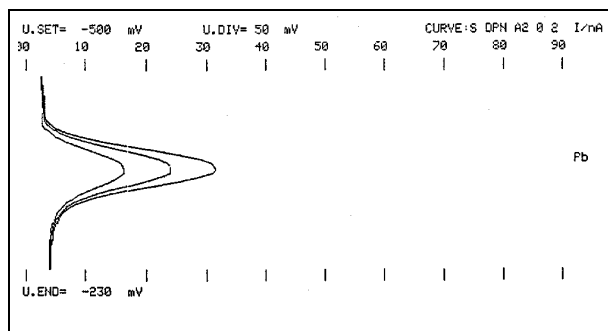
<b>Results:</b>	<b>Zn</b> $\mu\text{g/L}$	<b>Cd</b> $\mu\text{g/L}$	<b>Pb</b> $\mu\text{g/L}$	<b>Cu</b> $\mu\text{g/L}$
	<b>120</b>	<b>/</b>	<b>168</b>	<b>141</b>

## Determination of zinc

## Determination of cadmium



## Determination of lead



## Determination of copper

