

Data Ion Chromatography Analysis

Object / Record : 204 b (KN&V)

Artist : Anoniem

Title and date : Deksel, radgravure 1675-1700

Conservator : Mandy Slager



General condition

Date: 16/09/2020

2011: slecht, beschadigd, lacune 2013: slecht, glasziekte, gecrizzled en binnenzijde vochtig, weeping, cleaned (demi:ethanol (4:1) - no images by VAB.
 2017: 23 June: samples taken for IC analysis by G. Verhaar, was intended, but eventually not executed
 2020: 17 sept: samples taken for IC analysis: vet oppervlak, monsteropname in strijklicht zichtbaar. Vlekken binnenzijde. Condition yellow = poor
 2023: c.2 slippery inner surface, d.1.1. droplets inner surface, d.2.3 advanced crizzling outer surface, flakes coming loose many locations

Very poor

Examination and analysis

Date: 01/08/2023

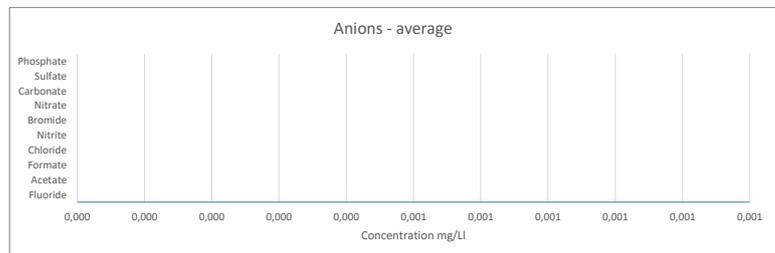
IC Analysis in 2017: no condition check at the time, samples taken by G. Verhaar, no information on location of the samples
 NO IC DATA AVAILABLE....?
 I C Analysis september 2020: samples were supposed to be taken from the exterior surface of the object for analysis by means of Ion Chromatography by G. Verhaar. It is mentioned in TMS; eventually not carried out (reason not mentioned).

Unknown

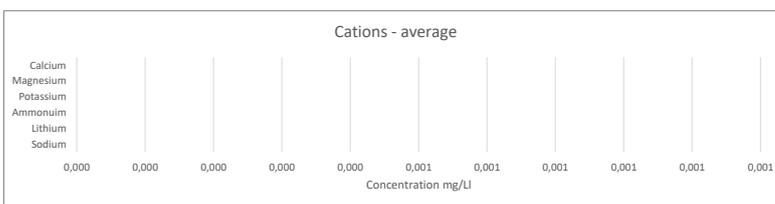
Concentrations (mg/L)

Anions				
	U	Ave	SD	RSD
Fluoride	19,00	0,000	0,000	0,000
Acetate	60,05	0,000	0,000	0,000
Formate	45,02	0,000	0,000	0,000
Chloride	35,45	0,000	0,000	0,000
Nitrite	46,01	0,000	0,000	0,000
Bromide	111,96	0,000	0,000	0,000
Nitrate	62,01	0,000	0,000	0,000
Carbonate	60,01	0,000	0,000	0,000
Sulfate	96,06	0,000	0,000	0,000
Phosphate	94,97	0,000	0,000	0,000

Graphs and/or Tables

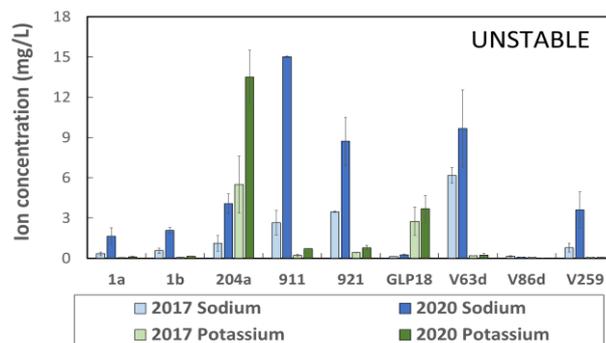


Cations				
	U	Ave	SD	RSD
Sodium	22,99	0,000	0,000	0,000
Lithium	6,94	0,000	0,000	0,000
Ammonium	18,04	0,000	0,000	0,000
Potassium	39,10	0,000	0,000	0,000
Magnesium	24,31	0,000	0,000	0,000
Calcium	40,08	0,000	0,000	0,000



Added Na and K concentrations

Sodium	22,99	0,000
Potassium	39,10	0,000
Total	µmol/L	0,000 Likely stable



Categorisation total alkaly ion concentration	µmol/L
IC-A	Likely stable < 20
IC-B	potentially unstable >20 <50
IC-C	likely unstable > 50

Interpretation, questions and comments on results

The object was cleaned in 2013, was considered in bad condition in 2011 and 2013 and 2023. It belongs to 204a (an instable object) and is very likely made of the same glass type as the goblet itself. So it can be assumed that it has the same outcome as 204 a .

204a: but is not to say that 204 b is the same: Relatively high concentrations of acetate, formate, chloride, sulfate and relatively high potassium concentration (See for more details the data form of 204b).

Interesting is the sulfates detected on the surface. Source is unknown.

Interesting also is the fact that the outside is slippery and the inside is crizzled and flaking. The clean surface of the break at the knob has nothing to do with glass instability. This is very likely the result of an impact. Interesting to have read in TMS that this particular part weighs 346 grams. When doing research on the physical stability of crizzled glass this information might come in handy. .

Suggestions further examination or analysis

* further analysis: IC analysis of the lid to see if the same as goblet 204a, xrf to determine same composition, extra analysis of similarities in condition characteristics.

* source of sulfates: research on where this might come from? * similar to GLP 18: same manufacturing techniques, same composition? art historically, engraving, use, fractography, ic data: should all be compared to see if there are any interesting similarities