

64-5 (2004)	Acetic acid
CAS N°: 64-19-7	EINECS N°: 200-580-7
EC-LV (8 h): 25 mg/m ³ Lowest European LV (8h): 13 mg/m ³ Highest European LV (8h): 25 mg/m ³	EC-STLV: - Lowest European STLV: 25 mg/m ³ Highest European STLV: 50 mg/m ³

SUMMARY OF THE METHOD

Language: English	Reference: Acetic acid: OSHA, PV 2119, Sampling and Analytical Methods, Salt Lake City (2003).
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Summary: Samples are collected by drawing a known volume of air through glass sampling tubes containing coconut shell charcoal. Samples are extracted with 10 mM NaOH. Quantitative determination is carried out by ion chromatography with chemical suppression.

SAMPLING

Sampler type	Sampling tube
Sampling substrate	Coconut shell charcoal
Recommended flow rate	0,2 l/min
Recommended sampling time	4 h
Recommended volume	48 l

TRANSPORT AND STORAGE

Description/conditions of transport and storage incl. specific issues	After sampling the sampling tube is closed with plastic caps provided. The samples can be stored at room temperature or in a refrigerator for at least 14 days.
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ANALYSIS

Sample preparation	The front section and the control section are placed in separate 20-ml vials. Discard the glass tube, the urethane foam plug and the glass wool plug. 10 ml of 10 mM NaOH solution are added to each vial. The vials are sealed immediately with caps and shook on shaker for 30 minutes. The sample solution is then filtered and injected into the ion chromatograph.
Analytical technique	Analysis for acetate by chemically-suppressed IC and conductivity detection.

METHOD EVALUATION DATA

Range studied	2,5 - 50 mg/m ³ (0,115-2,31 mg/tube)
Sampling bias	-
Analytical bias	- 2,8 %
Method bias	-
Sampling precision	not applicable
Analytical precision	-
Method precision	-
Limit of quantification	0,007 mg/m ³ (0,3 µg per sample)
Overall uncertainty (EN 482)	-
Expanded uncertainty (prEN 482)	-

INFORMATION IN RELATION TO THE VALIDATION	
Is the sample dissolution procedure described widely applicable?	yes
Does the sample dissolution method include wall deposits, where applicable?	yes
Was a test gas atmosphere used, where applicable?	no
How was the recovery determined?	A desorption efficiency of 97,2 % was found at a relative humidity of 80 % for spiked samples.
Was the sampler capacity or breakthrough volume determined?	not applicable
Was temperature and RH considered, where appropriate?	yes
EVALUATION	
Rating category	B
Rationale for rating	Up to date methodology, detailed method description, no sufficient validation data in the method.
Observations	The butyrate ion is an analytical interference on the recommended analytical column.
Similar methods	None.