87-1 (2004)	Acetonitrile
CAS Nº: 75-05-8	EINECS Nº: 200-835-2
EC-LV (8 h): 70 mg/m Lowest European LV (8h): 50 mg/m³ Highest European LV (8h): 68 mg/m³	EC-STLV: - Lowest European STLV: 100 mg/m³ Highest European STLV: 280 mg/m³

SUMMARY OF THE METHOD	
Language: Spanish, English	**Reference:** **Determinación de acetonitrilo en aire:** MTA/MA-055/A04, Métodos de Toma de muestra y análisis, INSHT (2004). **Acetonitrile**
Summary: Air is drawn through a sorbent tube containing activated charcoal. After sampling, the collected acetonitrile is desorbed with dichloromethane containing methanol (50 µl/ml) and the resulting solution is analysed by GC/FID.	
SAMPLING	
Sampler type	Sorbent tube
Sampling substrate	Activated charcoal (100/50 mg)
Recommended flow rate	0,2 l/min
Recommended sampling time	20 min
Recommended volume	4 l
TRANSPORT AND STORAGE	
Description/conditions of transport and storage incl. specific issues	Sample tubes are closed with plastic caps and transported to the laboratory as soon as possible. Stability was studied by sampling test gas atmosphere at RH = 80 %. It has shown that samples can be stored for up to 7 days at 4 ºC (93,1 ± 1,83 % recovery).
ANALYSIS	
Sample preparation	The front and back sorbent sections are transferred to separate vials. The glass wool plugs are discarded. 1 ml of dichloromethane containing 50 µl of methanol and 1 µl of 1-hexanol as internal standard is added to each vial, which is then capped and allowed to stand for 30 min, with occasional agitation.
Analytical technique	Analysis by GC / FID.
METHOD EVALUATION DATA	
Range studied	7 - 145 mg/m^3
Sampling bias	-
Analytical bias	-
Method bias	-6,1 % to +1,6 % (corrected for desorption efficiency)
Sampling precision	-
Analytical precision	0,4 - 0,7 %
Method precision	1 - 2,1 %

METHOD EVALUATION DATA (continued)	
Limit of quantification	-
Overall uncertainty (EN 482)	3,7 - 8,6 %
Expanded uncertainty (prEN 482)	13,2 - 14,8 %
INFORMATION IN RELATION TO THE VALIDATION	
Is the sample dissolution procedure described widely applicable?	yes
Does the analysis include wall deposits, where applicable?	not applicable
Was a test gas atmosphere used, where applicable?	Yes, dynamic test gas apparatus.
How was the recovery determined?	From spiked samples an analytical recovery of 100 % was found. From test gas atmospheres studies a method recovery > 94 % was found.
Was the sampler capacity or breakthrough volume determined?	Yes. BV was determined to be 10 l sampling at a flow rate of 0,2 l/min, RH 83 %, an acetonitrile concentration of 125 mg/m^3.
Was temperature and RH considered, where appropriate?	Yes. The method was evaluated by sampling generated atmospheres of acetonitrile at both high (80 %) and low (20 %) RH. The effect of temperature was not studied.
EVALUATION	
Rating category	A 1
Rationale for rating	Up to date methodology, detailed method description according ISO 78/2, performance and validation test data included in the method, OU and expanded uncertainty requirements met. The overall uncertainty data above have been calculated from MTA/MA overall recovery and precision data using the formula in EN 482. The expanded uncertainty data have been calculated using the method described in the EU mandated report *Analytical methods for chemical agents*.
Observations	-
Similar methods	None.