Diffusive sampler for Sulphur dioxide

Enclosed: diffusive samplers for Sulphur dioxide and forms for noting monitoring site and exposure times. The samplers are marked with a passam code.

Installation of monitoring site

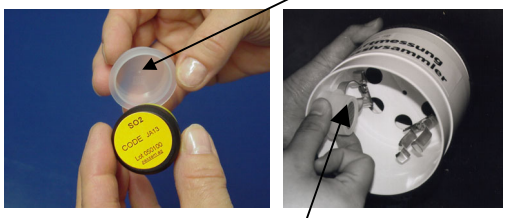
The diffusion tubes are placed, with the open end in a shelter to protect them from light and to minimize the influence of strong wind. In the absence of other requirements samplers should be exposed at heights of 2 - 3 m above the ground in positions of unrestricted air movement. In order to avoid sampling in the O_3 depleted boundary layer close to walls, preferred sites are free standing columns, lamp posts etc. The samplers should not be easily reached by unauthorized persons and be located in situations where loss through theft or vandalism are unlikely.

Description of monitoring site

The concentration value is representative only for the immediate sampling site. To interpret ambient values it is important to have a precise description of the monitoring site, and if possible a photographic documentation

Monitoring

At the beginning of sampling, the cap opposite of label is removed.



The samplers are mounted into the protection shelter as figure shows.

The cap is retained and replaced at the end of the sampling period.

Sampling record

The code together with the site identification are noted in the record. As well as the starting and the ending time.

Project: power plant CKW (Example) Color of tube: yellow

Site Code	Code passam	Start Date	Time	End Date	Exposure time	hours	Remarks
Fuxing Lu Nr. 127	CKW2	12.6.01	12:00	26.6.01	12:00	332	
Plant entrance	CKW4	12.6.01	12:10	26.6.01	12:10	332	
Wucheng Lu	CKW16	12.6.01	12:25	26.6.01	12:55	332.5	wet

Note: For proper identification of samplers and correct assignment to monitoring site passam code has to be noted on the record.

Storage and mailing

Exposed as well as unexposed sampler should be stored, if possible, in a refrigerator; at least in a dark, cool place. Shelf life is 6 month before use and at least 4 month after exposure.

Please do not leave the samplers in a closed car that is exposed to direct sunlight or extreme temperatures.

The exposed sampler should be sent back regularly, at least every 8 weeks, to the laboratory for analysis.

Calculation of results

The ambient concentration is calculated according the following formula:

$$C_u = \frac{m_d - m_b}{SR \cdot t}$$

C_u:	ambient concentration	[µg/m^3]
m_d:	mass absorbed	[µg]
m_b:	blank	[µg]
SR:	sampling rate	[ml/min]
t:	exposure time	[min]

Sampling rate used is 11.9 ml/min at 20°C

passam ag **www.passam.ch**

Laboratory for Environmental Analysis

Schellenstrasse 44, CH-8708 Männedorf, phone 0041 1 920 46 44, fax 0041 1 920 24 97 e-mail info@passam.ch

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