

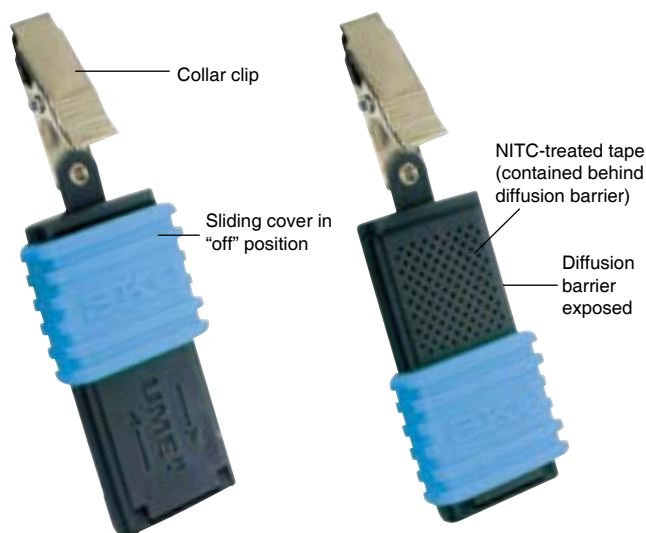
# UMEX<sup>400</sup> Passive Sampler

Easy, Economical, and Reliable Collection of Aliphatic Amines

The UME<sup>X</sup> 400 Passive Sampler for Aliphatic Amines was developed for the accurate and stable collection of ppm-level aliphatic amines. Constructed of tough polypropylene, the UME<sup>X</sup> 400 contains a tape treated with 1-Naphthyl-isothiocyanate (NITC) — the same chemistry as active OSHA Method 60, but with the convenience of passive sampling. The single-use samplers are provided in individual aluminized pouches that can be used to transport the sampler to a laboratory after sampling. The shelf-life date is printed on a label on the outside of each pouch for easy inventory management. The UME<sup>X</sup> 400 Sampler includes a clip for attachment to a worker's collar for personal sampling or in an appropriate location for area sampling.

## Using the UME<sup>X</sup>400 Passive Sampler

Sampling with the UME<sup>X</sup> 400 Sampler is very easy and requires no pump or training. Simply remove the badge from the pouch, record sampling information on the back of the sampler, and slide the cover to the "on" position. Clip the sampler on a worker for personal sampling or in an appropriate location for area sampling for up to 8 hours. When sampling is complete, simply slide the cover to the "off" position, place the sampler back in the pouch, and seal. Send the sampler to an accredited laboratory for analysis by high-performance liquid chromatography with UV detection (HPLC-UV). The UME<sup>X</sup> 400 sampler is designed for single use only. Do not reuse UME<sup>X</sup> samplers.



UMEX<sup>400</sup> Sampler with sliding cover in "off" position

UMEX<sup>400</sup> Sampler with sliding cover in "on" position

► Same chemistry as active OSHA Method 60

► Accurate and reliable

► Validated sampling rates for:

- Methyl amine
- Allyl amine
- Dimethyl amine
- n-Butyl amine
- Isopropyl amine

► Economical and easy to use

- No pump or training required

► Highly sensitive and specific analysis method

► Small and unobtrusive

► Simple-to-use "on/off" sliding cover

► Safe

- No glass or chemical liquids in the sampler

► Concentration range from 0.5 to 10 ppm

► Use for personal or area sampling

See more information and ordering on reverse side!

SCIENCE.  
SERVING PEOPLE.



# UME<sup>x</sup> 400 Passive Sampler

Easy, Economical, and Reliable Collection of Aliphatic Amines

## Performance Profile

<b>Sampling Rates:</b>	<i>See table at right</i>
<b>Concentration Range:</b>	0.5 to 10 ppm
<b>Detection Principle:</b>	Formation of a stable amine derivative, made from a reaction of the amine with NITC
<b>Analysis Method:</b>	Analysis by HPLC with UV detection at 254 nm
<b>Accuracy:</b>	± 25% for all amines except methyl amine ± 35% for methyl amine
<b>Shelf-life:</b>	12 months from date of manufacture in refrigerator
<b>Storage:</b>	<b>Before use:</b> ≤39.2 F (4 C) <b>After use:</b> Samples can store at ambient temperatures for 14 days <i>For storage greater than 14 days, store at ≤39.2 F (4 C).</i>
<b>Temperature Effects:</b>	No effect on sampling rate from 50 to 86 F (10 to 30 C)
<b>Humidity Effects:</b>	No effect on sampling rate from 10 to 80% relative humidity (RH)
<b>Wind Velocity Effects:</b>	No effect from 5 to 100 cm/sec
<b>Interferences:</b>	None found; highly specific for amines
<b>Validation:</b>	Partial
<b>Dimensions:</b>	3.4 x 1.1 x 0.35 in (8.6 x 2.8 x .89 cm)
<b>Weight:</b>	0.38 oz (10.8 g)
<b>Slide Cover:</b>	Blue

## Other UME<sup>x</sup> Passive Samplers Available

The same convenient and economical UME<sup>x</sup> design is also available for sampling formaldehyde/other aldehydes (**UME<sup>x</sup>100**), sulfur dioxide/nitrogen dioxide (**UME<sup>x</sup>200**), and ammonia (**UME<sup>x</sup>300**). Contact SKC for more information or visit [www.skccinc.com](http://www.skccinc.com).

## UME<sup>x</sup> 400 Sampling Rates for Amines

Compound	Sampling Rate <sup>‡</sup> (ml/min)	RSD
Methyl amine	18.4	14.0
Dimethyl amine	18.2	5.8
Isopropyl amine	13.9	9.5
Allyl amine	22.4	7.7
n-Butyl amine	18.1	9.2

<sup>‡</sup> Partial validations; see the *Passive Sampling Guide* at [www.skccinc.com/samplingguides](http://www.skccinc.com/samplingguides)

## Reference:

Lindahl, R., Levin, J.O., and Andersson, K., "Determination of Volatile Amines in Air by Diffusive Sampling, Thiourea Formation, and High-performance Liquid Chromatography," *Journal of Chromatography*, 643, 1993, pp. 35-41

## Ordering Information

Description	Cat. No.
<b>UME<sup>x</sup>400</b> Passive Sampler for Aliphatic Amines, <sup>*,†</sup> pk/10	<b>500-400</b>

\* Limited shelf-life; storage at ≤39.2 F (4 C) required. Do not store with food.

† Designed for single use only. Do not reuse UME<sup>x</sup> samplers.