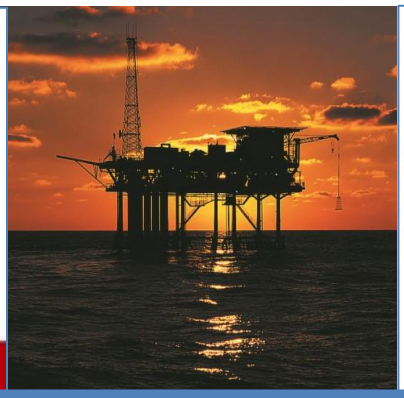
Sampling Strategy



Sampling Strategy in Biomonitoring Programme

Sampling strategy includes the timing and the frequency of sample collection.

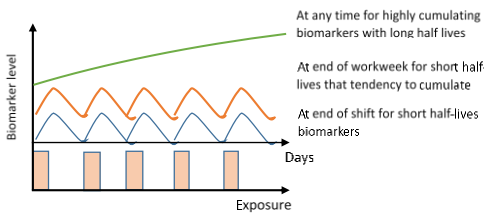
Factors affecting sampling strategy:

1. Specific biomarker of exposure to be monitored
2. Half-lives of biomarkers of interest
3. Degree of exposure (concentration)
4. Duration of exposure

Half-life – the time it takes for the concentration to drop to half.

Frequency of biomonitoring are set either at fixed intervals (eg. Once a year, every 6 month) or depending on previous biomonitoring results.

Example of half-lives where sampling usually takes place:



https://oshwiki.eu/images/8/80/Figure_2.jpg

ALS Malaysia is part of the ALS global laboratory group and is an ISO 17025 accredited laboratory equipped with state of the art facilities. We provide testing services to various government and private sectors across the world.

Sampling time definition by ACGIH:

Prior to shift	16 hours after exposure ceases, but before any exposure on sampling day
End of shift	As soon as possible after exposure ceases
End of the workweek	After 4 or 5 consecutive working days with exposure
Increase during shift	Requires pre- and post-shifts sample collection
Discretionary/Not critical	At any time: Determinant have long half-lives

Sampling time for common biomarkers offered at ALS:

Solvent	Urine biomarker	Sampling time
Benzene	*S-PMA or **TTMA	End of shift
n-Hexane	2,5-hexanedione	End of shift at end of workweek
Xylene	Methylhippuric acid (MHA)	End of shift
Toluene	Hippuric acid (HA)	End of shift
Carbon disulfide	***TTCA	End of shift
Methanol	Methanol	End of shift

*S-Phenylmercapturic acid (SPMA); **trans-trans muconic acid (TTMA); ***2-Thioxothiazolidine-4-carboxylic acid (TTCA)

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