

Report_20250129-Modified

Collaboration: Center for Environmental Science in Saitama (CESS)

PFAS analysis in water

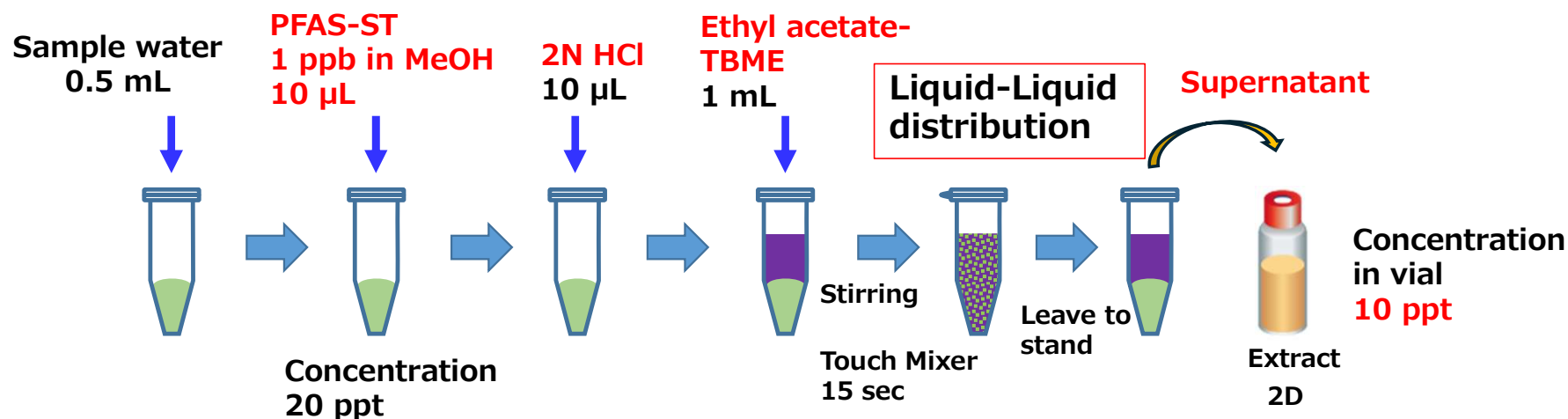
2025/2/4

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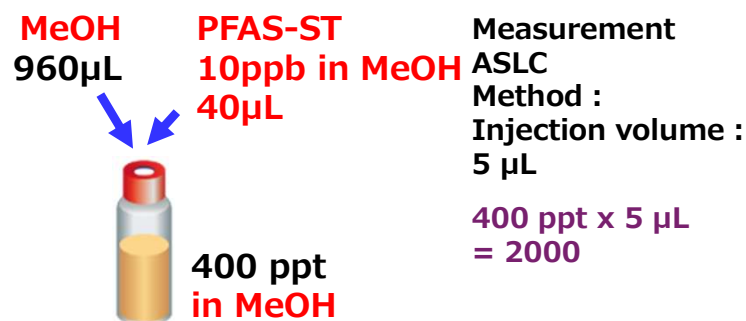
RYOICHI SASANO

Extraction Operation Flowchart

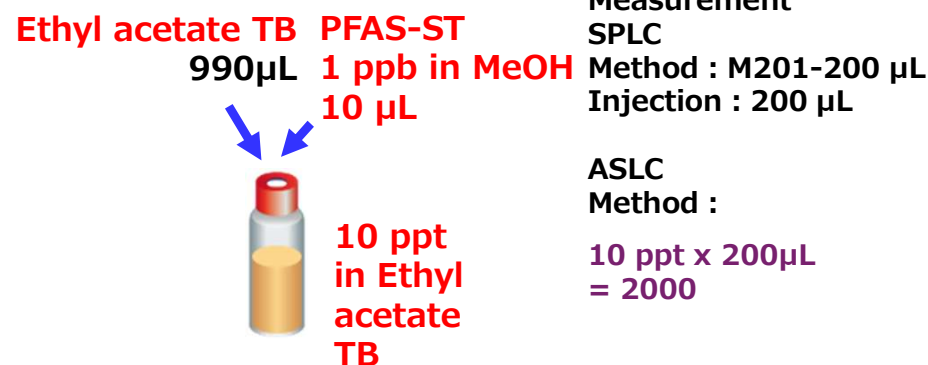
Ethyl acetate-TBME partition extraction method



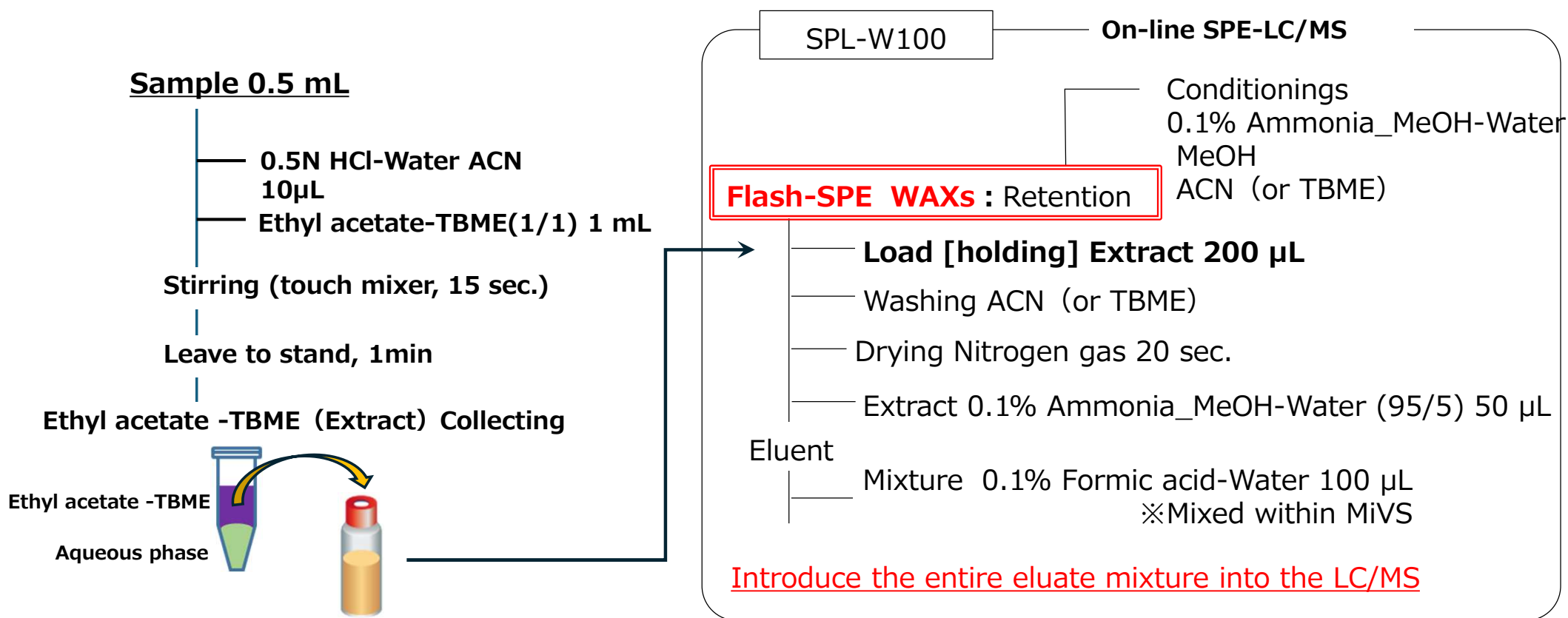
ST-ASLC Measurement



ST-SPLC Measurement



Measurement conditions by on-line SPE-LC/MS



ACN : Acetonitrile

TBME : tert-Butyl Methyl Ether

Additive recovery test

No.	Sample	Purified water			Tap water				Mineral water (hard water)				River water (Kino River - near the mouth)			
	ID	U	Addition 20 ppt		U	Addition 20 ppt			U	Addition 20 ppt			U	Addition 20 ppt		
		n=2	n=5		n=2	n=5			n=2	n=5			n=2	n=5		
		Ave.	Ave.	RSD	Ave.	Ave.	RSD	Recovery rate	Ave.	Ave.	RSD	Recovery rate	Ave.	Ave.	RSD	Recovery rate
1	PFBA_	5,146	52,919	4.2	11,881	60,137	4.0	101	7,040	52,813	2.4	96	7,634	53,569	4.2	96
2	PFMPA_		16,813	4.5		15,485	3.4	92		15,580	2.7	92		14,272	2.9	85
3	PFPeA_	5,638	93,036	3.0	14,000	94,301	3.7	92	5,821	83,226	2.6	89	7,230	87,115	5.9	91
4	PFMBA_		7,912	4.5		6,977	5.5	88								