Initiatives in downscaling cost effective chemical analysis using moving drop and other novel platforms

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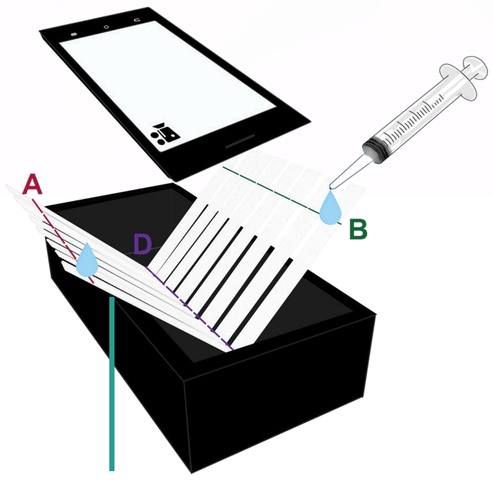
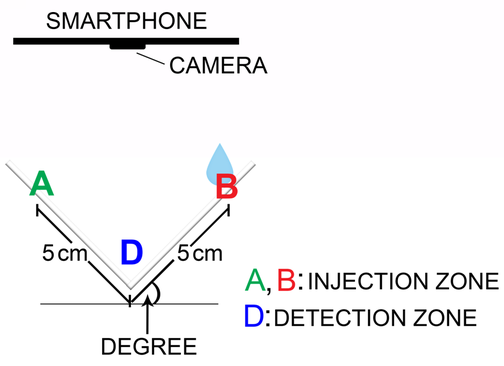
MOVING DROP BASED DEVICE

Published on *Talanta*



Stirring piece for coffee

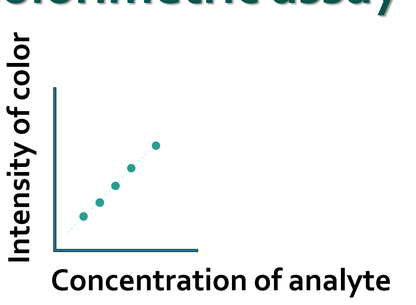


FRONT VIEW

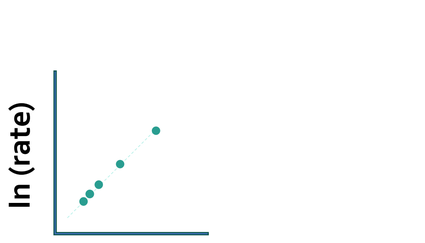
1. The solution of reagent and sample are dropped on the position A and B.
2. The change of reaction is monitored by taking a photo or recording a video.
3. The signals of color solution on a position D are translate by using the software.
4. The signals are statistically evaluated.

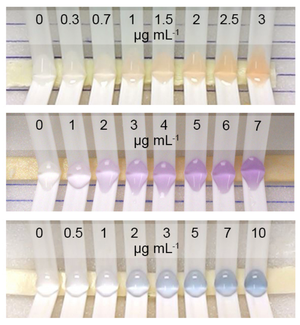
APPLICATION

Colorimetric assay



Kinetic study



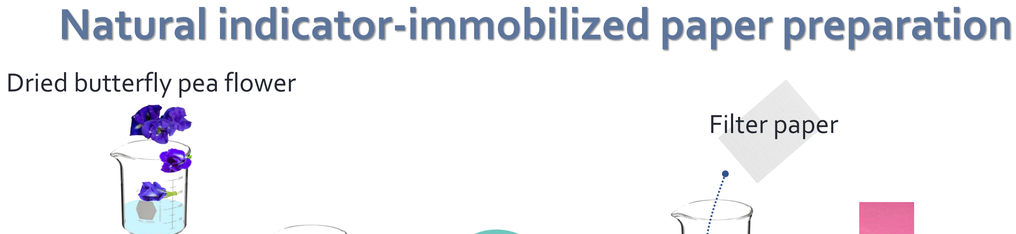


EXTREND TO EDUCATION

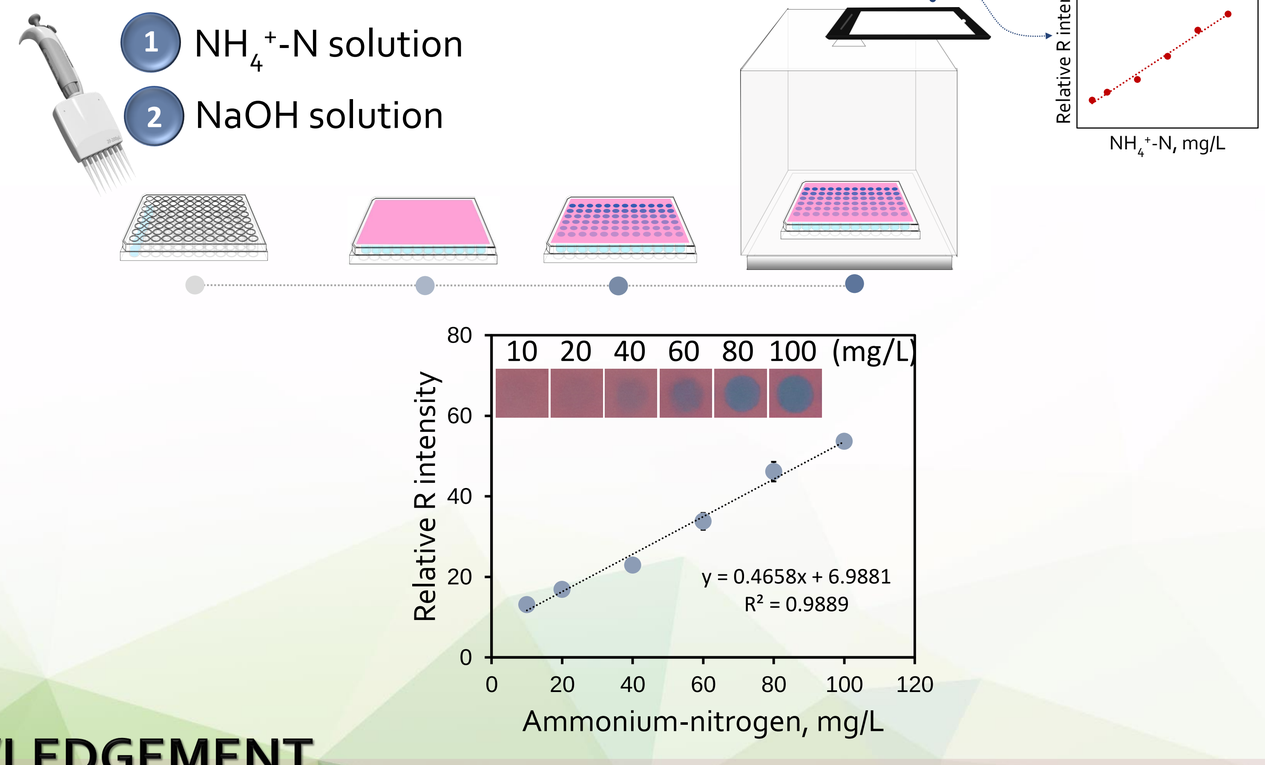
Simple colorimetric ammonium assay employing well microplate with gas pervaporation and diffusion for natural indicator immobilized paper sensor via smartphone detection

Published on *Microchemical Journal*

Natural indicator-immobilized paper preparation



The natural material sensor with downscaling pervaporation and gas diffusion for ammonium-nitrogen determination



ACKNOWLEDGEMENT

Mini-Symposium on Initiatives in (Analytical) Sciences

Linkage to Local Issue-Global Impacts-Sustainable World"