**Supporting material**

**Environmentally friendly method for determination of ammonia nitrogen in fertilizers and wastewaters based on flow injection-spectrophotometric detection using natural reagent from orchid flower**

Thanikan Sukaram1, Petcharat Sirisakwisut1, Jitnapa Sirirak1, Duangjai Nacapricha2,3

and Sumonmarn Chaneam1,2\*

*1Department of Chemistry, Faculty of Science, Silpakorn University, Nakhon Pathom, 73000, Thailand*

*2Flow Innovation Research for Science and Technology Laboratories (FIRST Labs), Bangkok, Thailand*

*3Center of Excellence for Innovation in Chemistry and Department of Chemistry, Faculty of Science, Mahidol UniversityBangkok 10400, Thailand*

\*Corresponding author. Email: schaneam@gmail.com

**Table S1** Comparison of concentration of ammonium ion (20.0 mmol L-1) and concentration of solution after spiking 200 mmol L-1 of each foreign species measured by the proposed GD-FIA with orchid reagent as acceptor.

|  |  |
| --- | --- |
| Foreign species | Concentration of ammonium in spiked solution (mmol L-1) |
|
| *No foreign species* | *20.0 ± 1.50* |
| Calcium(II) ion | 20.2 ± 0.25 |
| Copper(II) ion | 19.3 ± 1.58 |
| Iron(II) ion | 19.4 ± 0.30 |
| Manganese(II) ion | 19.4 ± 0.16 |
| Magnesium(II) ion | 20.0 ± 0.25 |
| Zinc(II) ion | 21.4 ± 0.20 |
| Nitrate ion | 22.9 ± 1.62 |
| Nitrite ion | 21.3 ± 0.11 |
| Urea | 21.3 ± 0.28 |