Supplementary information

Table S1 Composition of cream base

Phase	Composition	Amount (%w/w)
A	DI water	q.s. to 100
	Propylene glycol	30
	Glycerin	3
	EDTA	0.1
	Acrylates/C10-30 alkyl acrylate crosspolymer	0.5
	Dehydroxanthan gum	0.5
	DI water	30
B	Ceteareth-6 (and) stearyl alcohol	2.5
	Ceteareth-25	2.5
	Cetyl alcohol	1
	Stearyl alcohol	1
C	Neopentyl glycol diheptanoate, isododecane	3
	Dicaprylyl ether	1
	Paraffinoma liquidum	3
	Isopropyl myristate	3
	Propylene glycol, diazolidinyl urea, methylparaben, propylparaben	0.75
	Tocopheryl acetate	0.5
	Triethanolamine	adjust to pH 6.0-7.0

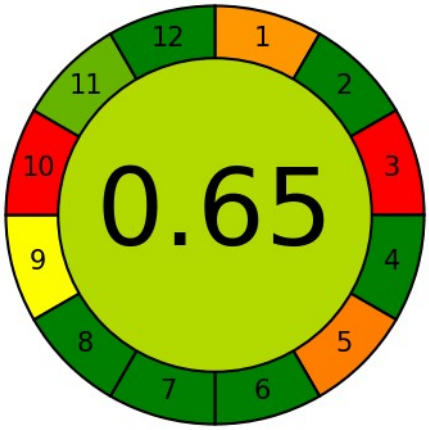

Fig. S1 Analytical GREennEss (AGREE) analysis of the proposed method.

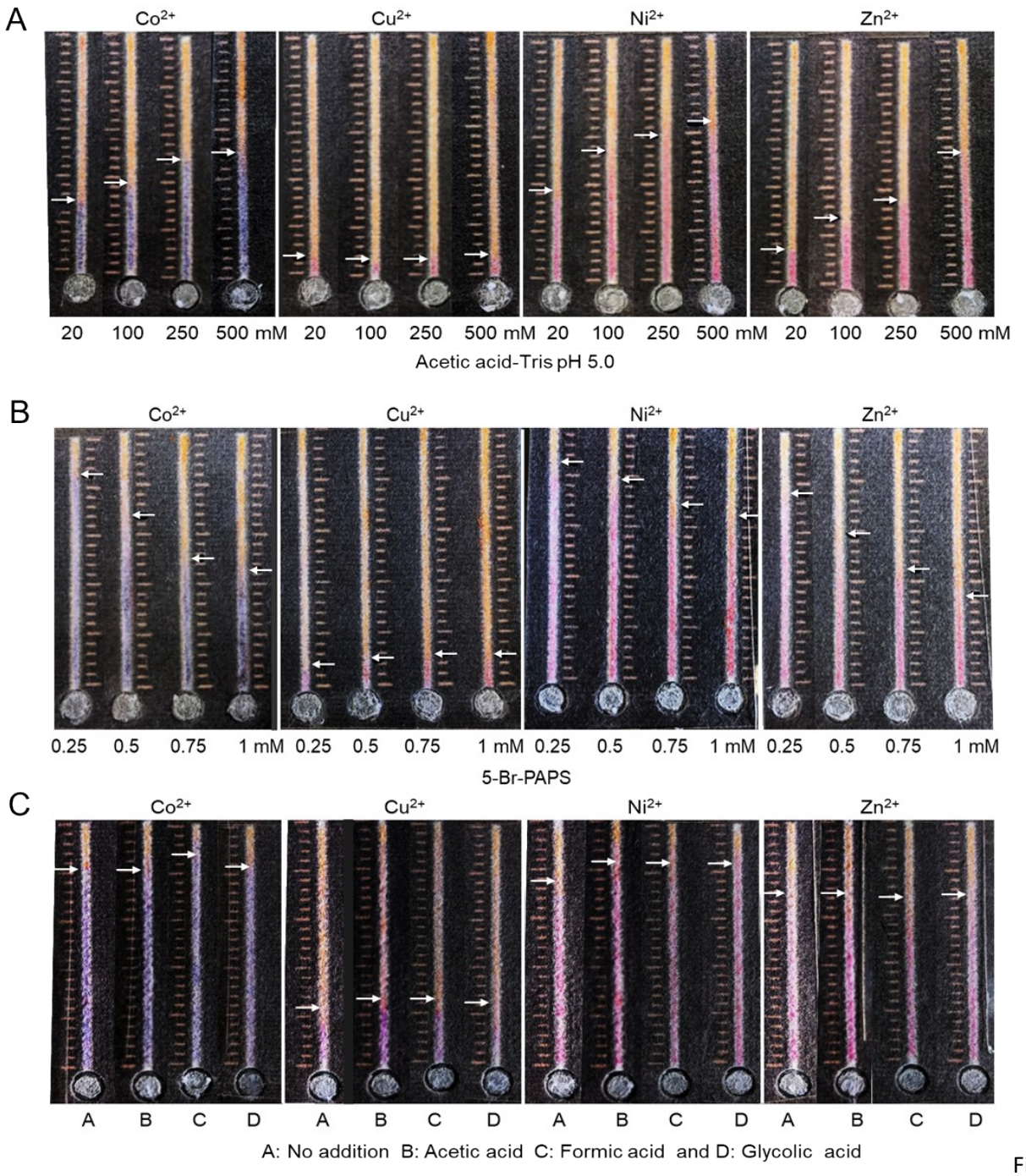

Fig. S2 Effects of (A) buffer concentration, (B) 5-Br-PAPS concentration in acetic acid-Tris pH 5.0, and (C) types of auxiliary complexing agents on the DμPADs for metal detection.

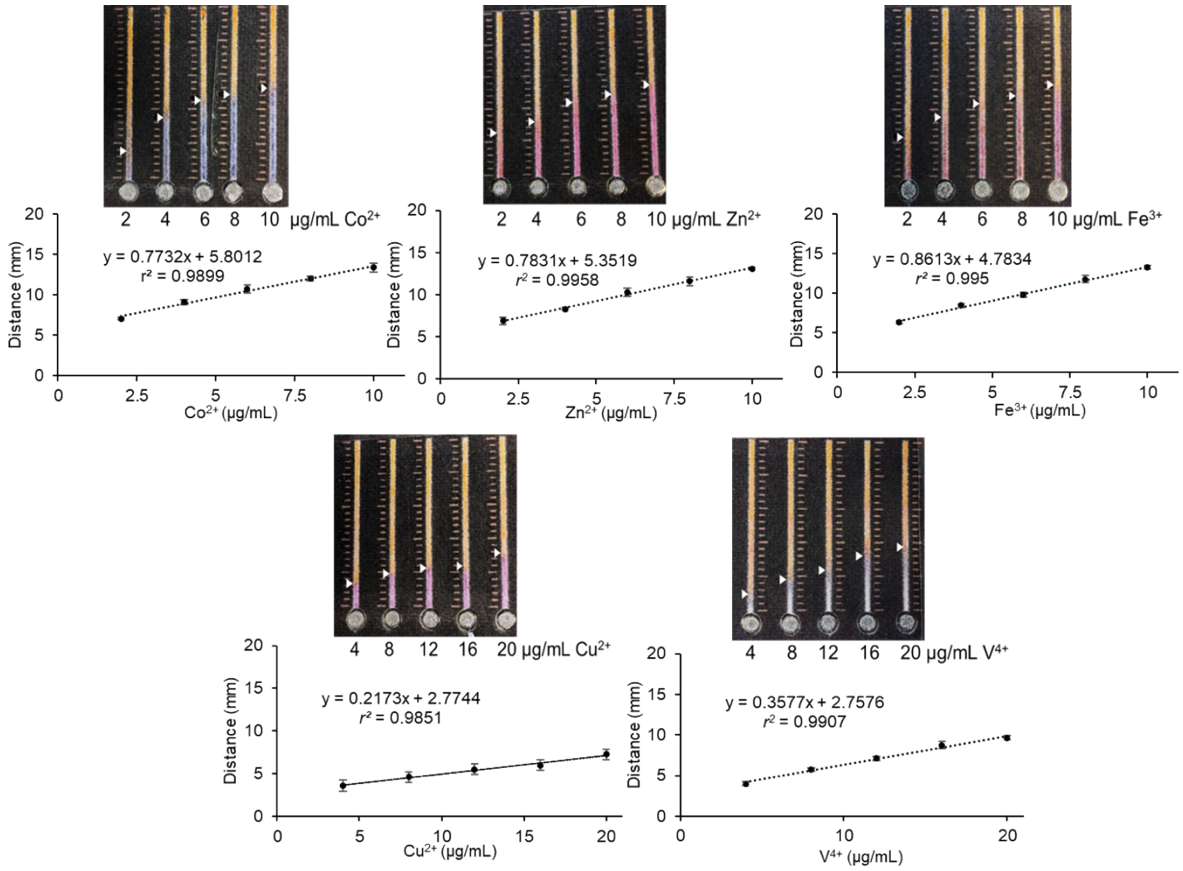

Fig. S3 Calibration curves of Co^{2+}, Cu^{2+}, Fe^{3+}, V^{4+} and Zn^{2+}

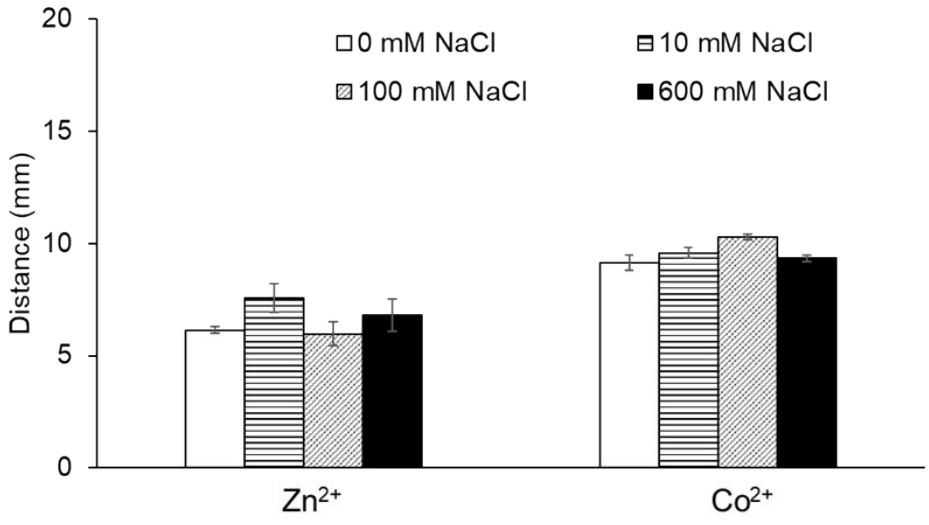

Fig. S4 Effects of NaCl concentration on the DμPADs for metal detection.