

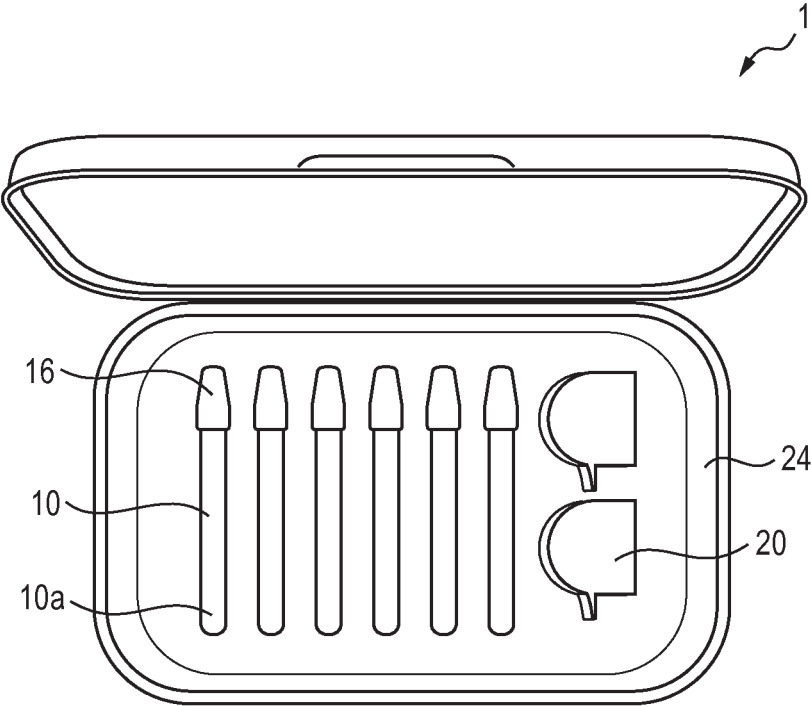


FIG. 1

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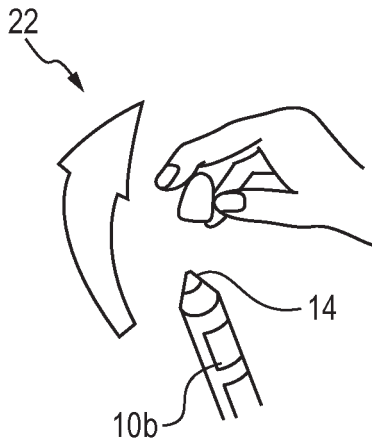


FIG. 2(a)

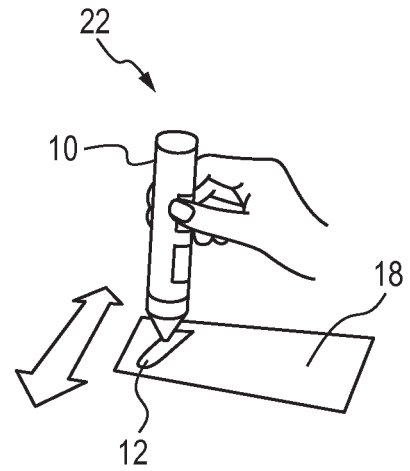


FIG. 2(b)

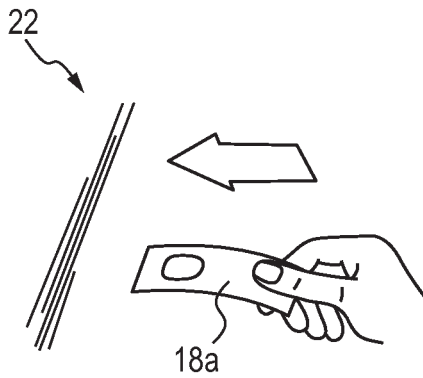


FIG. 2(c)

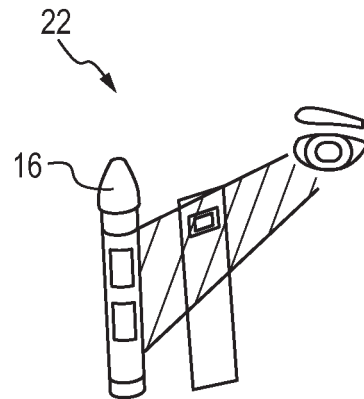


FIG. 2(d)



FIG. 3

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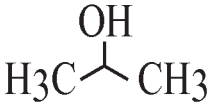
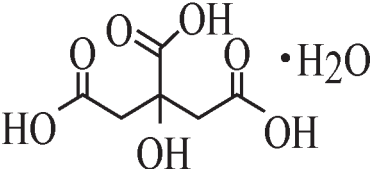
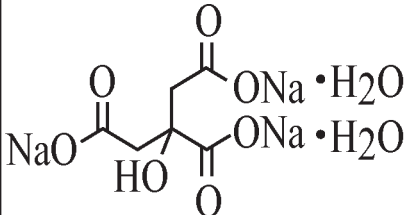
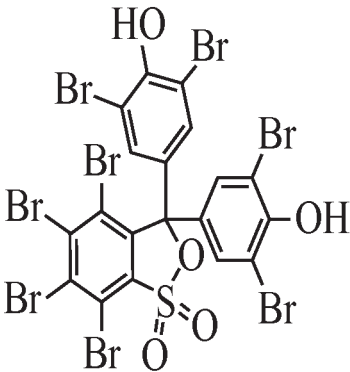
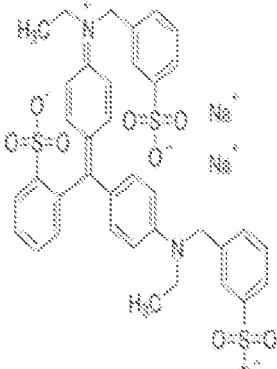
Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Water	-- (7732-18-5)	Solvent	H ₂ O
Isopropyl Alcohol	I9030 (67-63-0)	Solvent (dissolve Tetrabromophenol Blue), Biocide	
Citric Acid Monohydrate	C7129 (5949-29-1)	Citric Acid Buffer	
Sodium Citrate tribasic dihydrate	S4641 (6132-04-3)	Citric Acid Buffer	
Tetrabromophenol Blue	199311 (4430-25-5)	Protein (albumin) indicator	

FIG. 4

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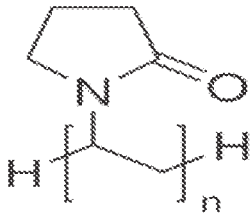
FIG. 5(a)

Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Glucose Oxidase	G6766 (9001-37-0)	Convert glucose to H ₂ O ₂	*Enzyme*
Horseradish Peroxidase	P8125 (9003-99-0)	Catalyze H ₂ O ₂ and Potassium Iodide reaction to form color change	*Enzyme*
Potassium Iodide	P2963 (7681-11-0)	Color Changing agent	KI
Erioglaucine disodium salt	861146 (3844-45-9)	Background Color (Blue)	
Polyvinylpyrrolidone K90 (10%)*	--	Thickener (enhances	--
Citrate Buffer (pH 5.5)**	--	Buffer	--
Water	-- (7732-18-5)	Solvent	H ₂ O

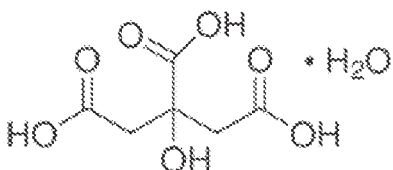
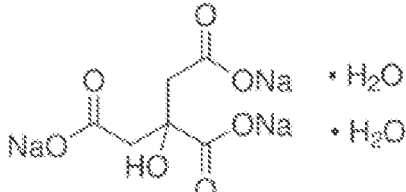
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FIG. 5(b)

* Polyvinylpyrrolidone K90 (10%) components:

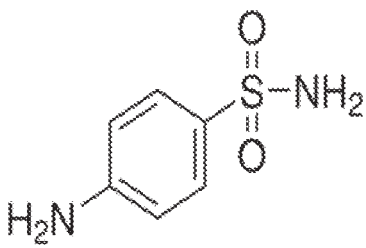
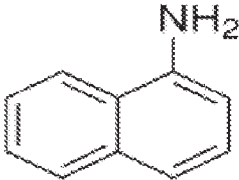
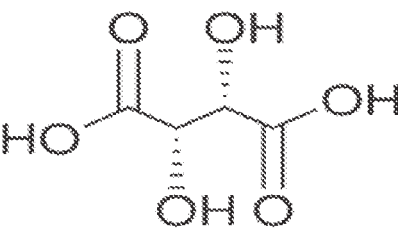
Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Water	-- (7732-18-5)	Solvent	H ₂ O
Polyvinylpyrrolidone K90	81440 (9003-39-8)	Thickener	

**Citrate Buffer components:

Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Water	-- (7732-18-5)	Solvent	H ₂ O
Citric Acid Monohydrate	C7129 (5949-29-1)	Citric Acid Buffer	
Sodium Citrate tribasic dihydrate	S4641 (6132-04-3)	Citric Acid Buffer	

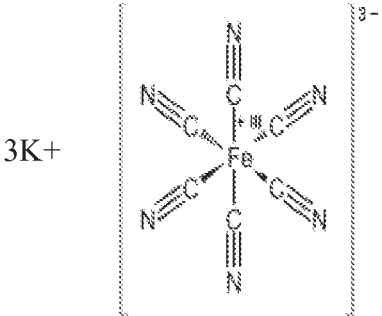
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FIG. 6

Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Methanol	322415 (67-56-1)	Solvent	CH ₃ OH
Sulfanilamide	S9251 (63-74-1)	Form Diazonium Salt in presence of nitrite ions	
1-naphthylamine	70731 (134-32-7)	Coupling agent (reacts with Diazonium Salt to create red dye)	
DL - Tartaric Acid	T400 (133-37-9)	Acidic environment for reaction	

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FIG. 7

Chemical	Sigma-Aldrich Product Number (CAS Number)	Purpose	Chemical Formula
Water	-- (7732-18-5)	Solvent	H ₂ O
Potassium Ferricyanide	702587 (13746-66-2)	Ketone Indicator	3K⁺ 
Tris(hydroxymethyl) aminomethane	252859 (77-86-1)	Basic Buffer	
Magnesium Sulfate heptahydrate	M1880 (10034-99-8)	Nitroprusside stabilizer	MgSO ₄ • 7H ₂ O