

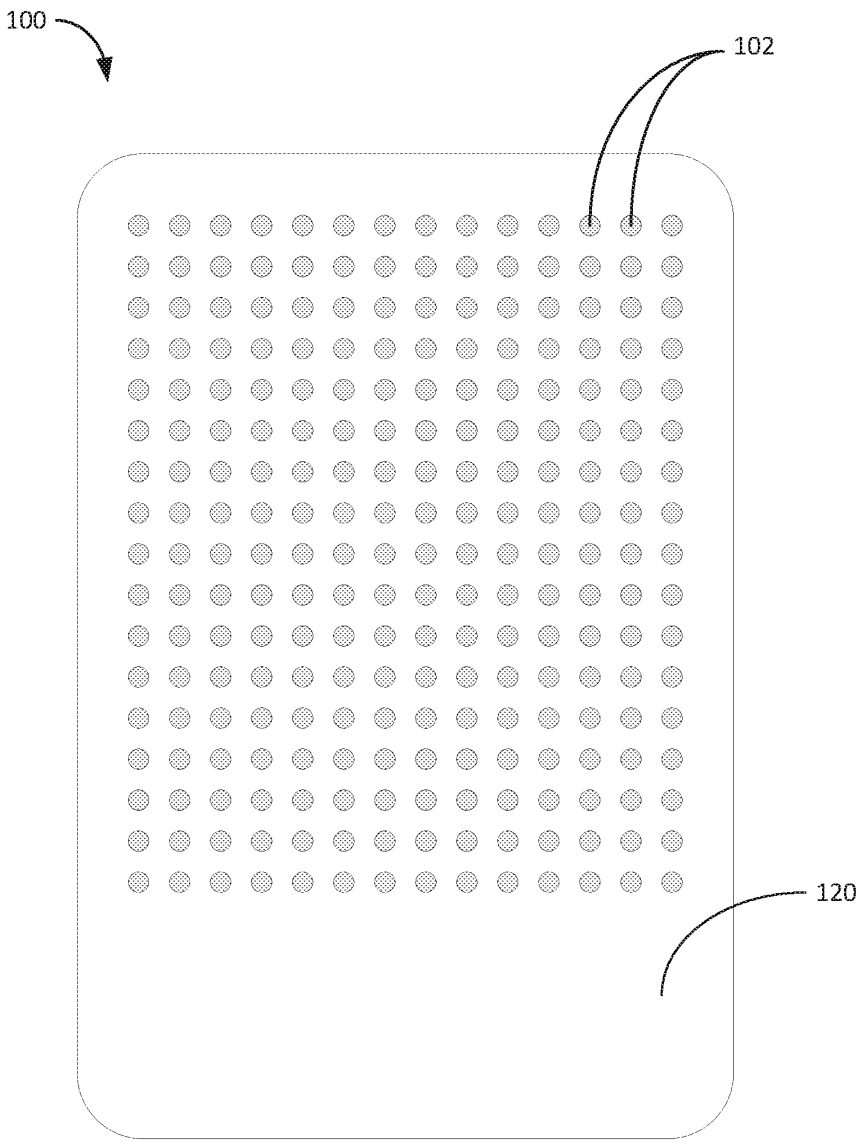


FIG. 1

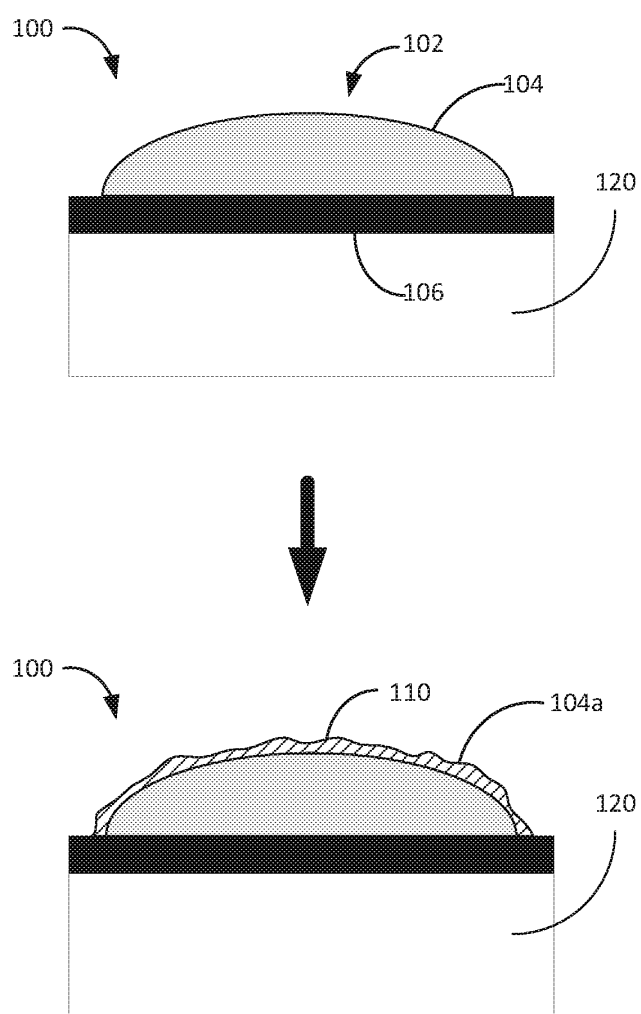


FIG. 2

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300

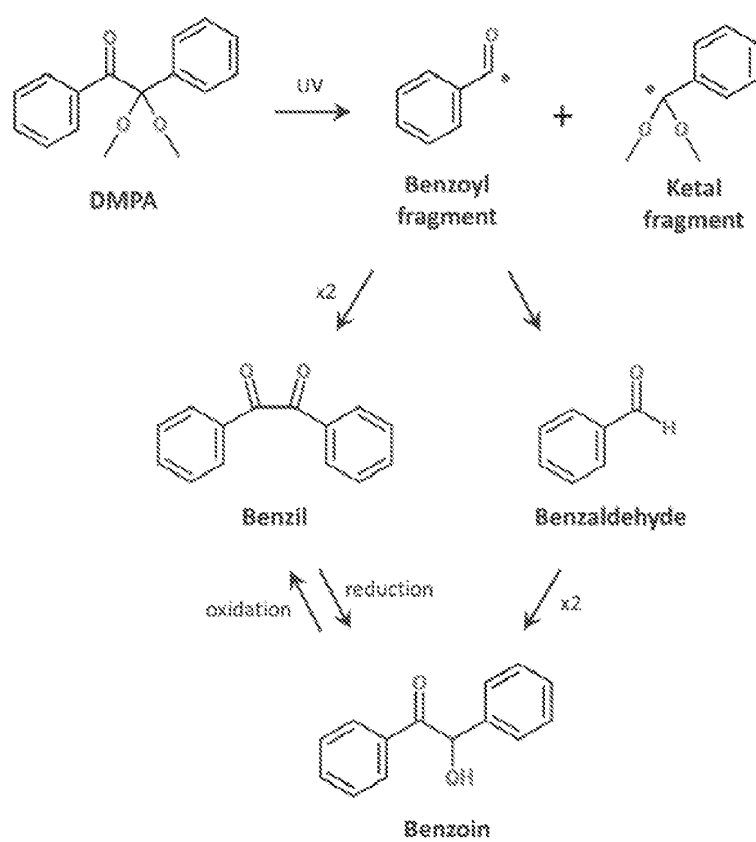


FIG. 3

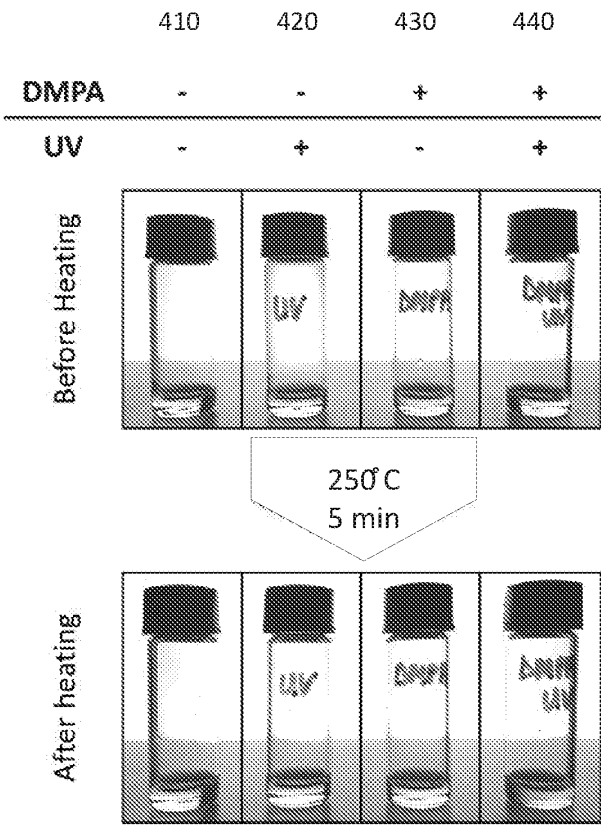


FIG. 4A

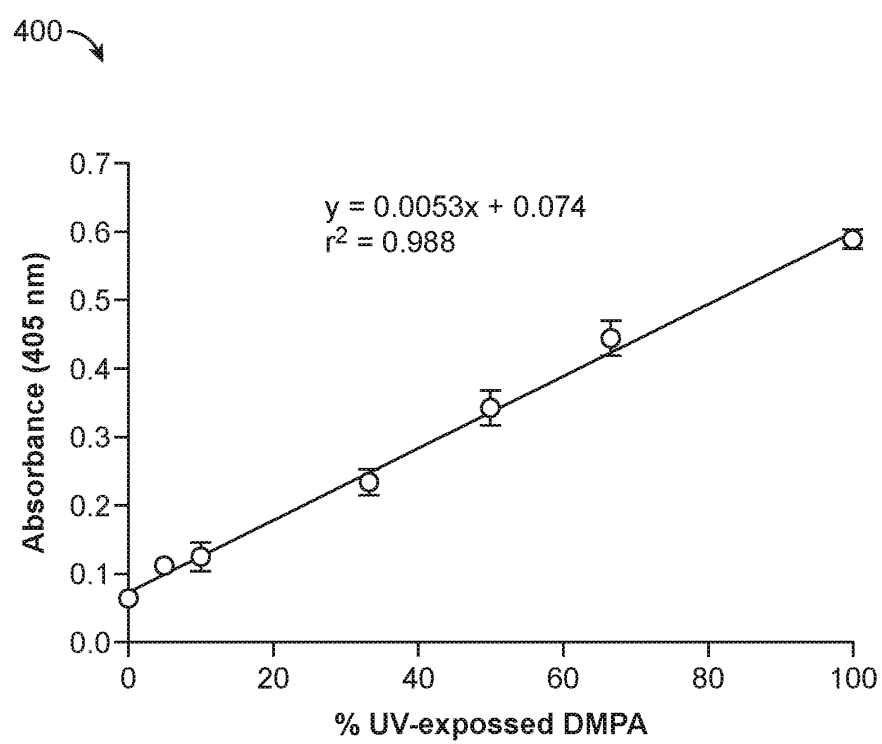


FIG. 4B

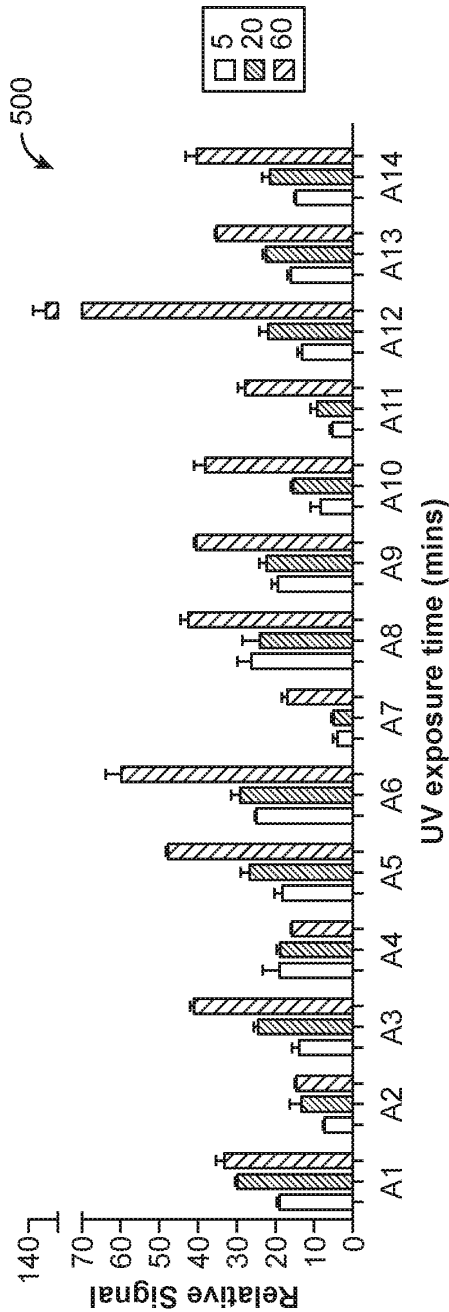


FIG. 5A

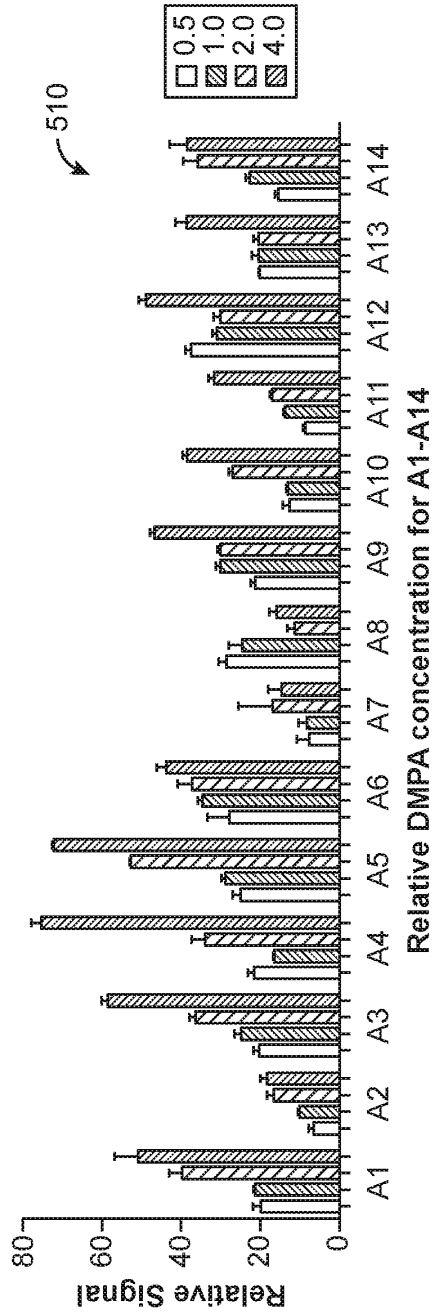


FIG. 5B

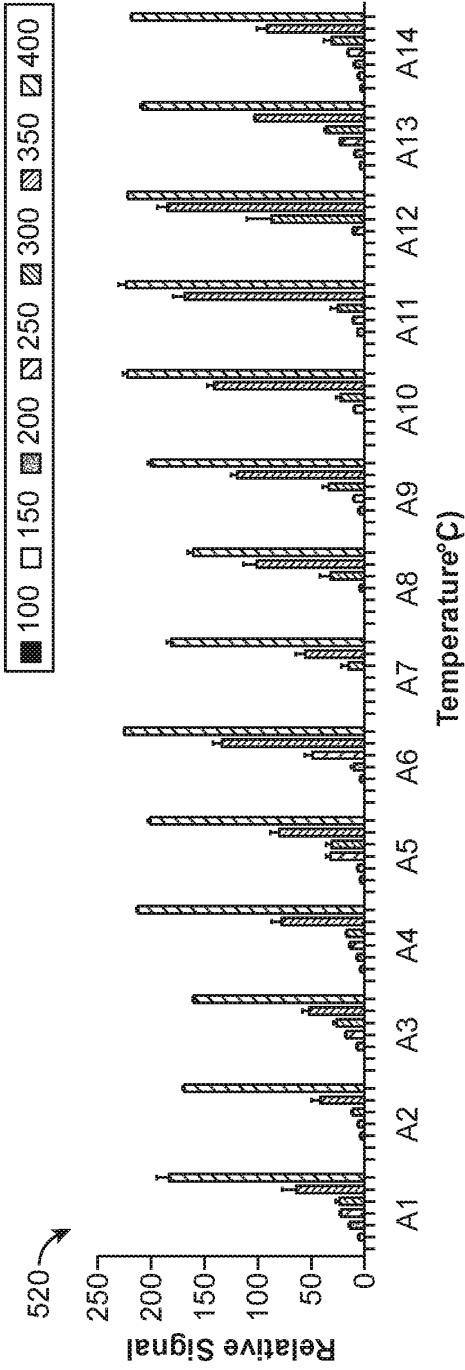


FIG. 5C

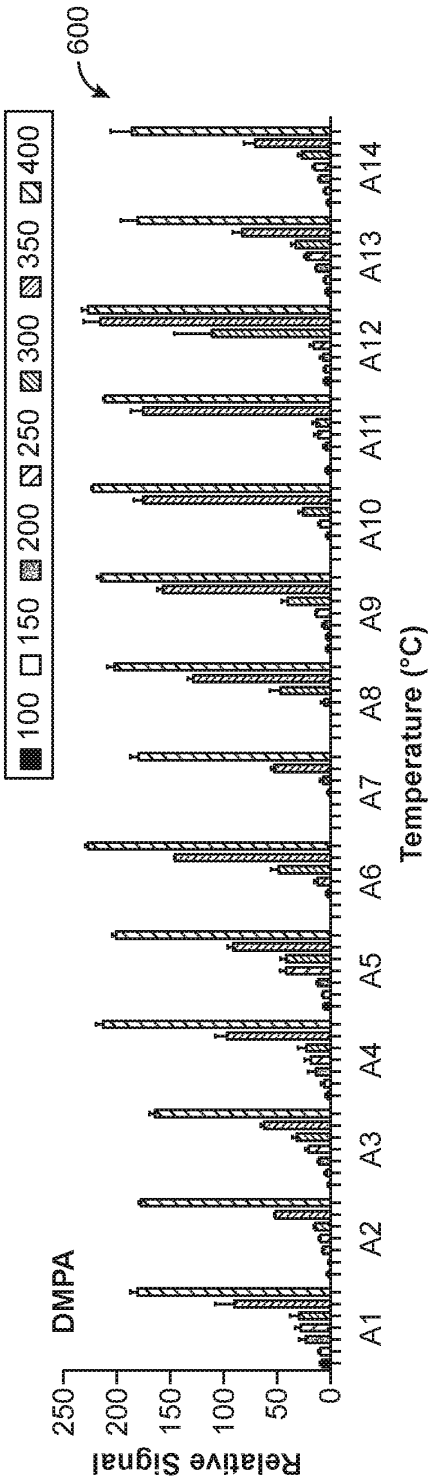


FIG. 6A

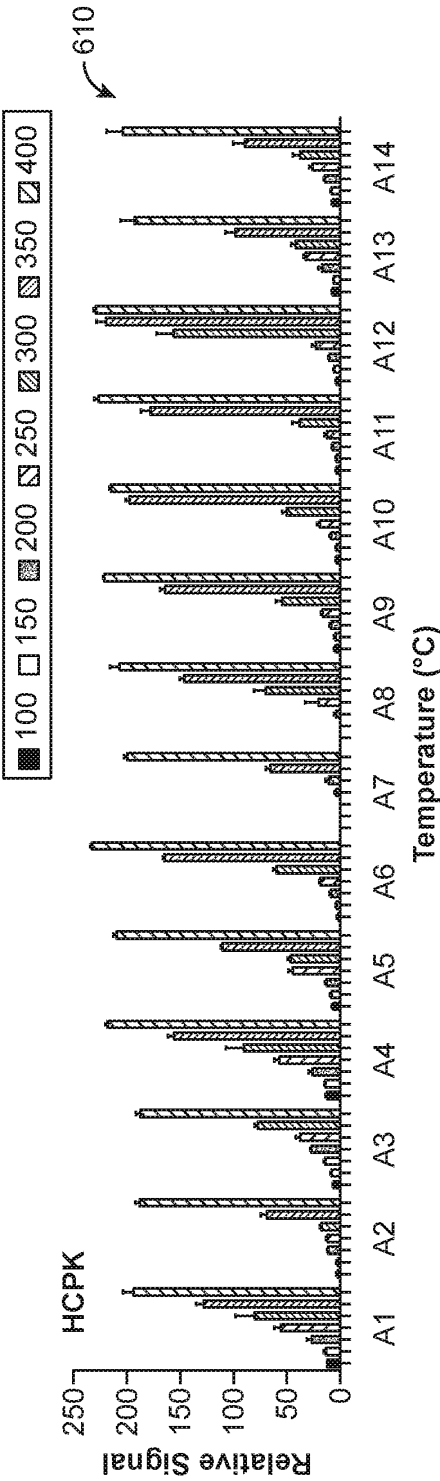


FIG. 6B

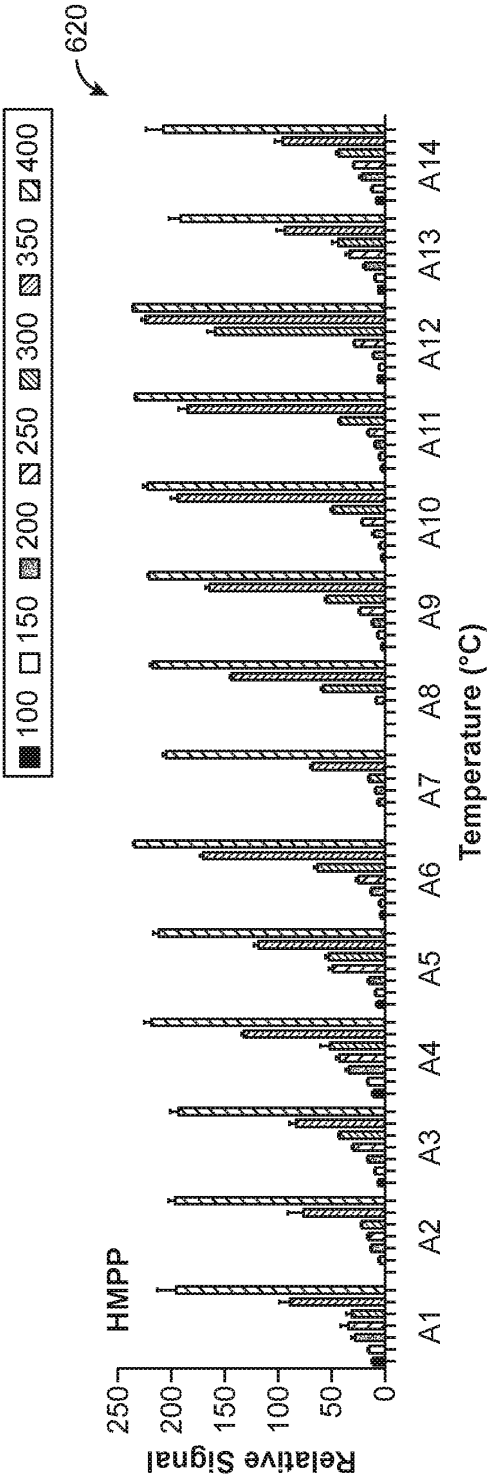


FIG. 6C

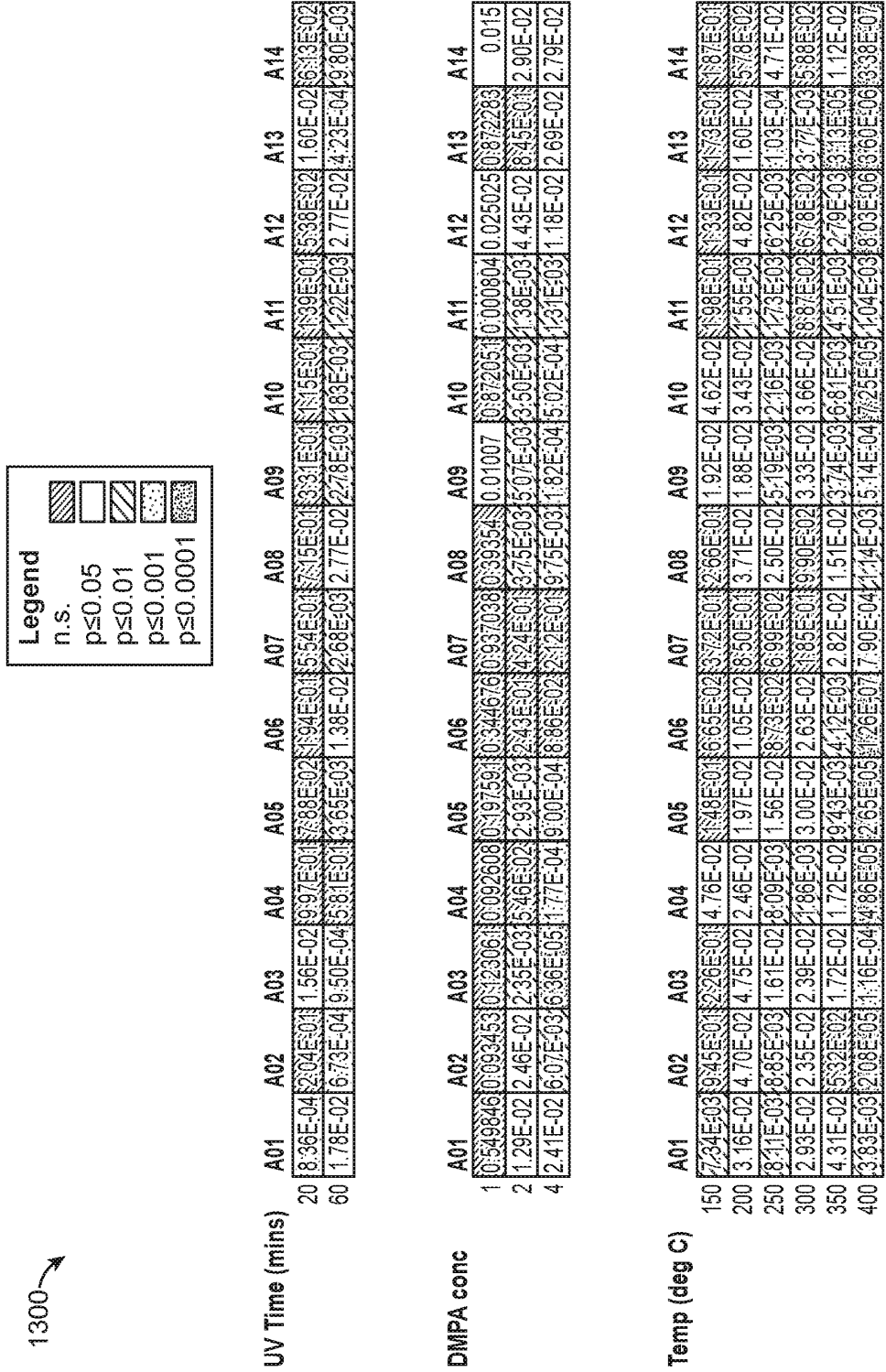


FIG. 7

DMIPA		A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14
Temp (deg C)															
150	572E-01	9.57E-01	2.24E-01	3.45E-01	4.18E-01	8.00E-01	2.05E-01	1.67E-01	7.24E-01	7.24E-01	4.80E-01	5.88E-01	4.43E-01	4.05E-01	2.14E-01
200	1.38E-01	6.68E-02	3.01E-02	3.01E-01	4.35E-02	3.31E-01	9.50E-01	9.30E-01	3.01E-01	3.01E-01	3.24E-01	3.00E-01	3.55E-01	1.77E-02	3.16E-02
250	2.89E-02	1.48E-02	1.80E-02	2.40E-01	2.28E-02	1.43E-02	1.60E-02	9.97E-02	1.16E-02	9.97E-02	2.24E-03	2.22E-01	1.20E-02	1.20E-03	8.46E-03
300	2.31E-02	2.30E-03	1.46E-02	2.40E-01	1.65E-02	2.18E-02	2.01E-02	4.23E-02	1.19E-02	2.10E-02	2.98E-02	8.68E-02	5.26E-03	1.88E-03	
350	4.13E-02	1.68E-04	1.79E-03	1.16E-02	1.95E-03	3.16E-07	2.42E-03	1.39E-03	5.21E-04	2.48E-03	3.55E-03	4.17E-03	1.09E-02	1.52E-02	
400	8.34E-04	4.49E-06	7.44E-04	7.00E-04	2.29E-05	3.35E-05	1.61E-03	7.30E-04	9.28E-06	6.33E-07	3.10E-08	1.18E-04	6.77E-03	9.77E-03	
HCPK		A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14
Temp (deg C)															
150	2.00E-01	3.53E-01	1.76E-02	3.06E-01	3.33E-01	9.03E-01	9.03E-02	4.86E-01	4.93E-01	7.24E-01	7.90E-01	5.07E-01	2.73E-01	6.24E-01	2.17E-01
200	3.62E-02	5.51E-03	1.75E-03	1.63E-02	2.35E-02	9.93E-04	9.97E-04	2.08E-01	6.88E-02	5.29E-02	4.22E-02	5.07E-02	4.37E-02	7.86E-03	
250	1.21E-02	4.18E-03	4.66E-05	4.99E-03	1.58E-03	1.10E-04	1.48E-01	2.54E-01	6.12E-03	1.10E-02	4.44E-03	1.45E-02	1.73E-03	3.38E-02	
300	6.25E-02	3.36E-03	8.64E-04	3.47E-02	1.25E-03	1.67E-03	3.94E-02	2.20E-02	3.14E-03	2.20E-03	3.14E-02	9.10E-03	3.10E-03	3.11E-02	
350	2.88E-03	4.69E-03	6.95E-04	6.44E-04	7.96E-07	9.74E-07	3.52E-03	2.46E-04	1.63E-05	1.60E-04	2.01E-03	9.41E-04	7.80E-03	1.24E-02	
400	2.30E-03	3.47E-04	1.99E-04	1.16E-06	2.48E-05	5.99E-07	6.82E-05	1.49E-03	3.08E-08	7.28E-08	1.39E-04	1.33E-06	3.35E-03	5.45E-03	
HMMP		A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14
Temp (deg C)															
150	1.21E-01	6.54E-02	9.12E-04	2.99E-03	3.57E-02	4.57E-01	4.57E-01	4.79E-01	5.89E-01	1.69E-02	3.82E-01	5.62E-01	7.40E-01	9.28E-02	2.88E-02
200	2.18E-02	1.93E-03	4.32E-04	4.06E-03	6.07E-03	1.09E-03	2.16E-01	2.20E-01	5.80E-04	8.69E-03	2.71E-02	7.54E-02	1.35E-02	1.75E-03	
250	5.80E-02	7.01E-04	6.95E-07	4.74E-03	6.99E-04	7.90E-04	1.87E-03	8.45E-04	1.48E-05	7.08E-04	9.29E-04	3.29E-04	6.57E-03	9.55E-05	
300	2.64E-02	5.03E-04	6.20E-04	3.95E-02	1.02E-03	4.96E-04	1.85E-03	1.47E-03	3.68E-04	2.32E-05	3.67E-04	1.62E-03	8.36E-03	4.43E-04	
350	1.53E-02	3.67E-02	6.88E-03	2.84E-05	6.85E-04	5.21E-05	3.98E-04	6.96E-07	3.81E-04	5.53E-04	1.66E-03	6.84E-07	4.67E-03	6.01E-03	
400	8.55E-03	7.20E-04	2.03E-03	8.35E-04	4.05E-04	1.69E-08	1.96E-08	3.44E-05	4.15E-06	1.08E-04	2.08E-07	5.93E-08	3.00E-03	5.36E-03	

FIG. 7(Cont.)

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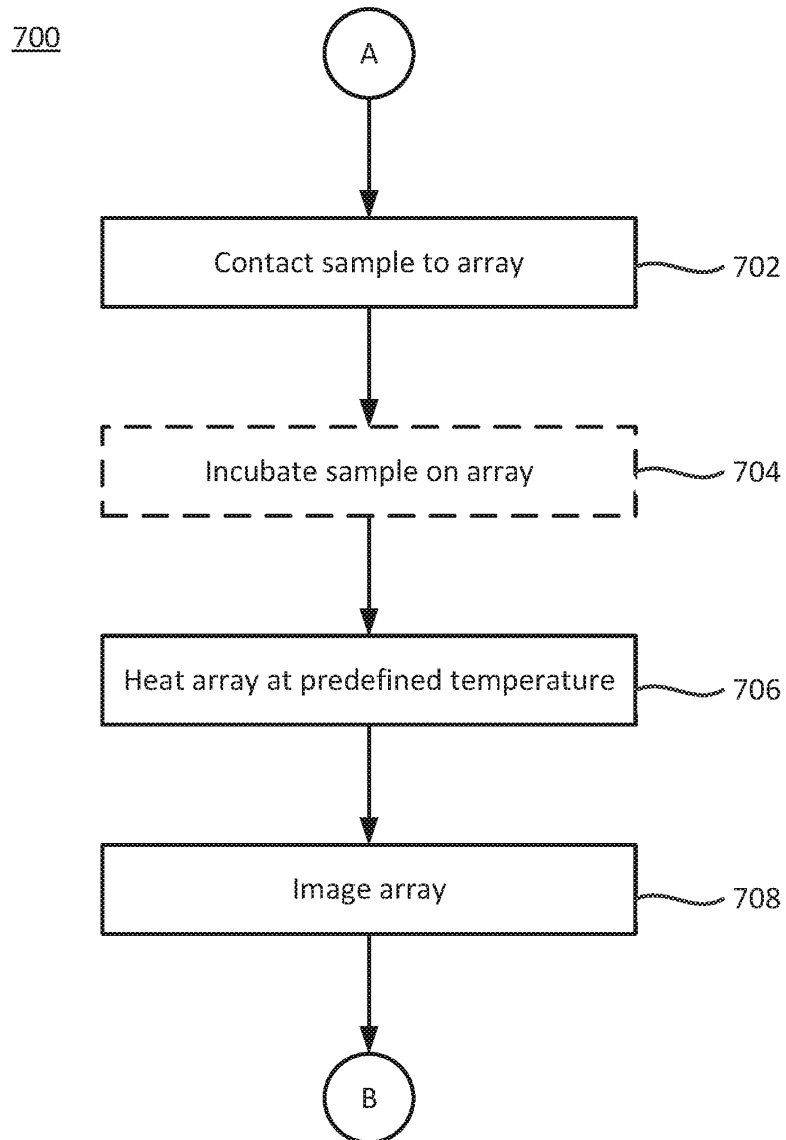


FIG. 8

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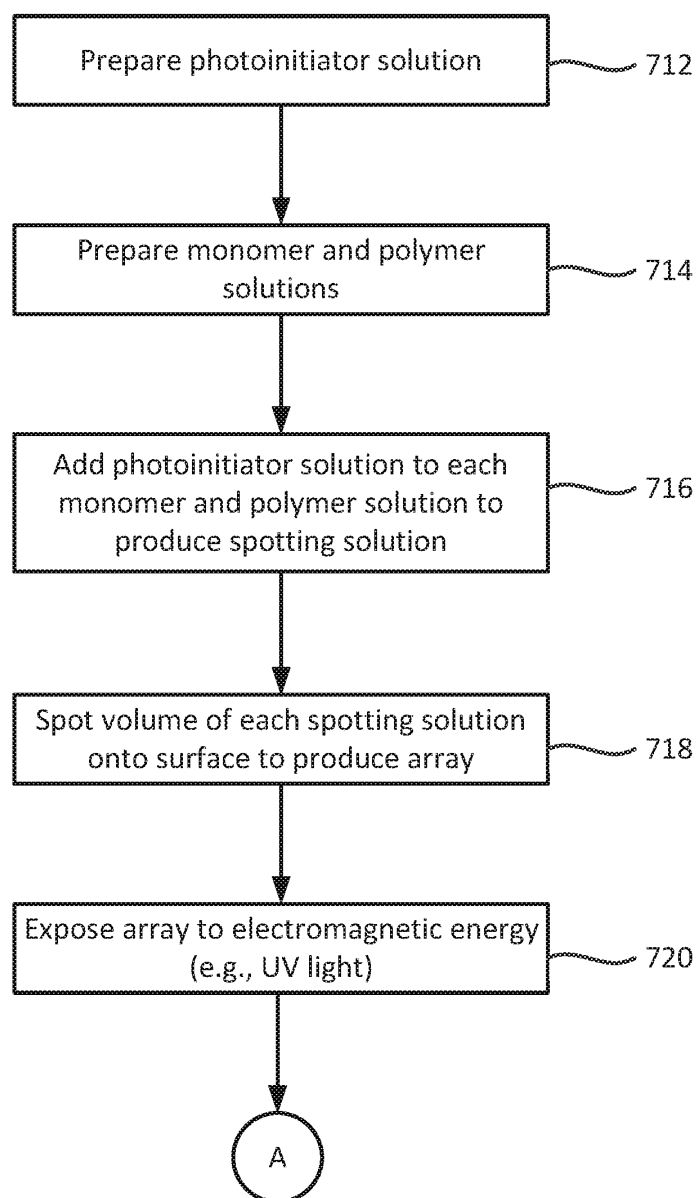
700

FIG. 9

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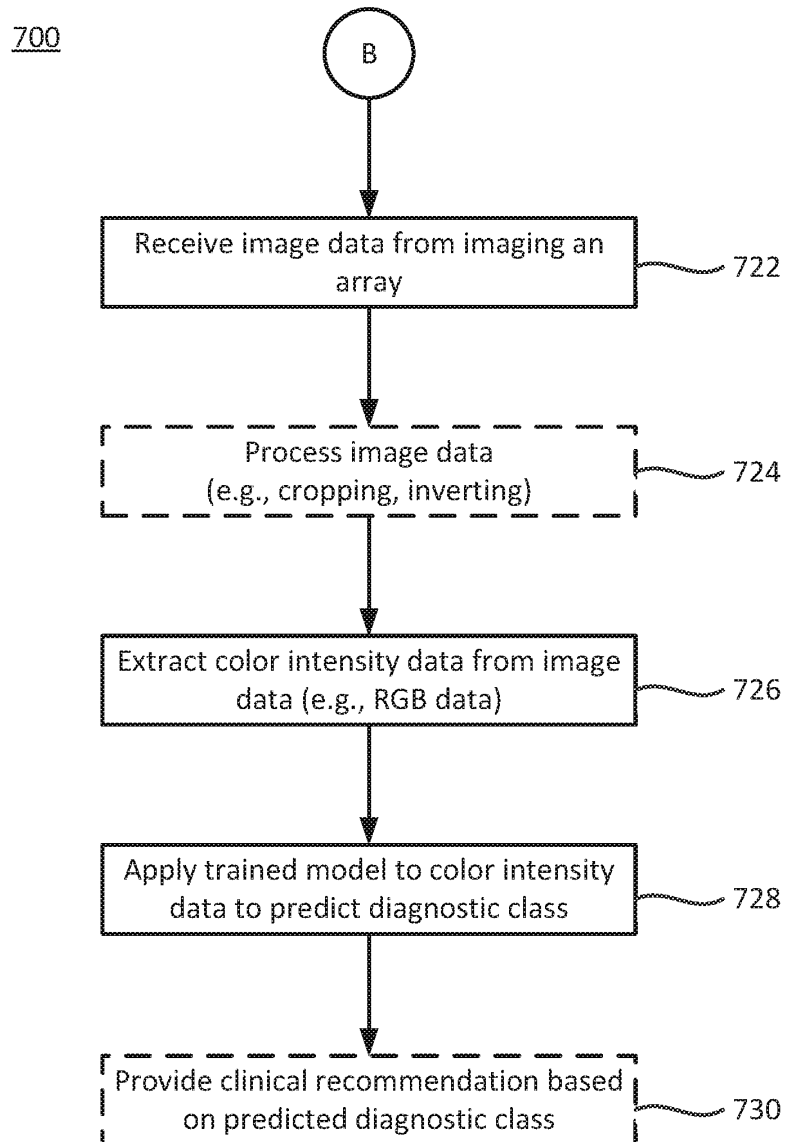


FIG. 10

800

Transmittance		
Ammonium sulfate	Bovine serum albumin	Coffee
Collagen	Cresol	Curry
Cysteine	Soap	Galactitol
Glucose	Glycine	Glyphosate
Green Tea	HCl	Carrageenan (iota)
Carrageenan (kappa)	Lysogeny Broth	Carrageenan (Lamda)
Lysine	Lysis buffer	Milk
Sodium chloride	Sodium hydroxide	Nutrient Broth
PEG-400	Phenol	Potassium sorbate
Sodium doecyl sulfate	Sodium carbonate	Sodium citrate
Sorbitol	Sucrose	TAE buffer
Triton X-100	Urea	Urine
Vitamin C	Vitamin D	Water

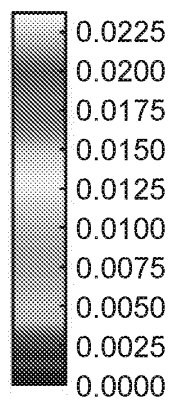
FIG. 11A

810

LUT		
Ammonium sulfate	Bovine serum albumin	Coffee
Collagen	Cresol	Curry
Cysteine	Soap	Galactitol
Glucose	Glycine	Glyphosate
Green Tea	HCl	Carrageenan (iota)
Carrageenan (kappa)	Lysogeny Broth	Carrageenan (Lamda)
Lysine	Lysis buffer	Milk
Sodium chloride	Sodium hydroxide	Nutrient Broth
PEG-400	Phenol	Potassium sorbate
Sodium doecyl sulfate	Sodium carbonate	Sodium citrate
Sorbitol	Sucrose	TAE buffer
Triton X-100	Urea	Urine
Vitamin C	Vitamin D	Water

FIG. 11B

820



Spot Intensity Heatmap

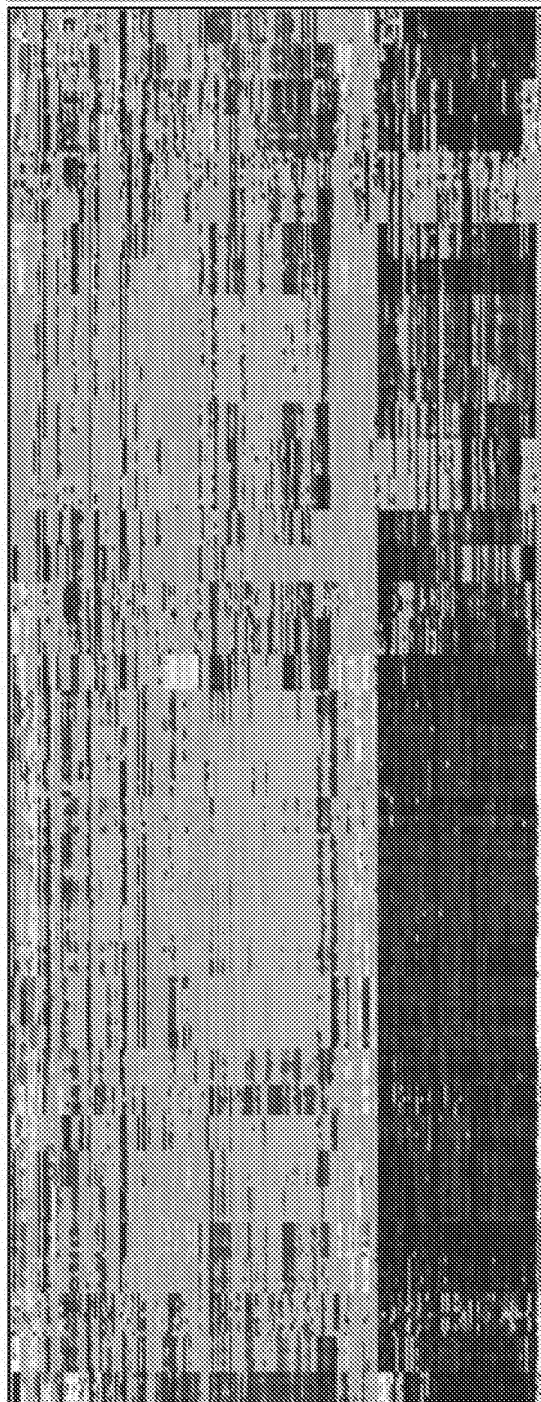
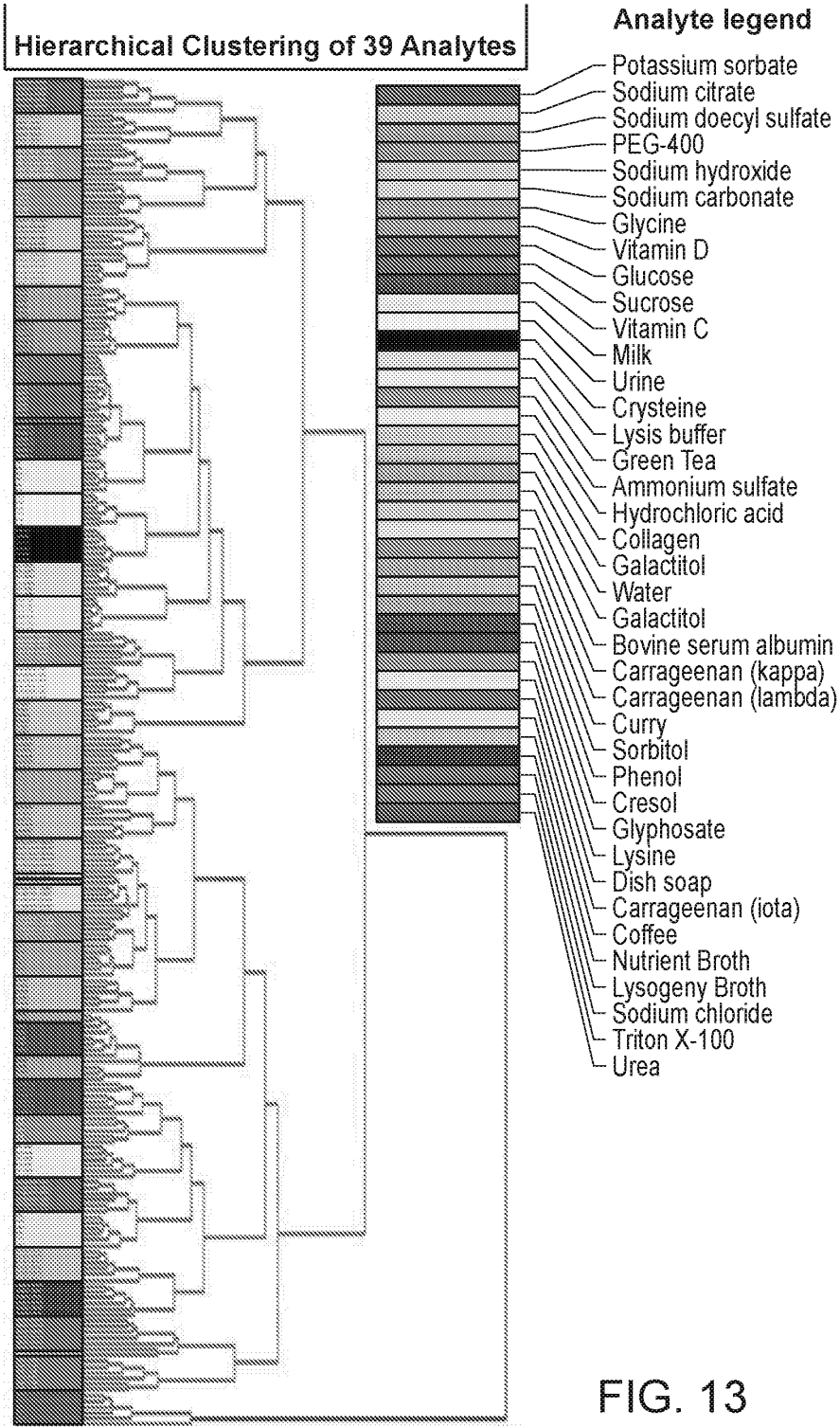


FIG. 12



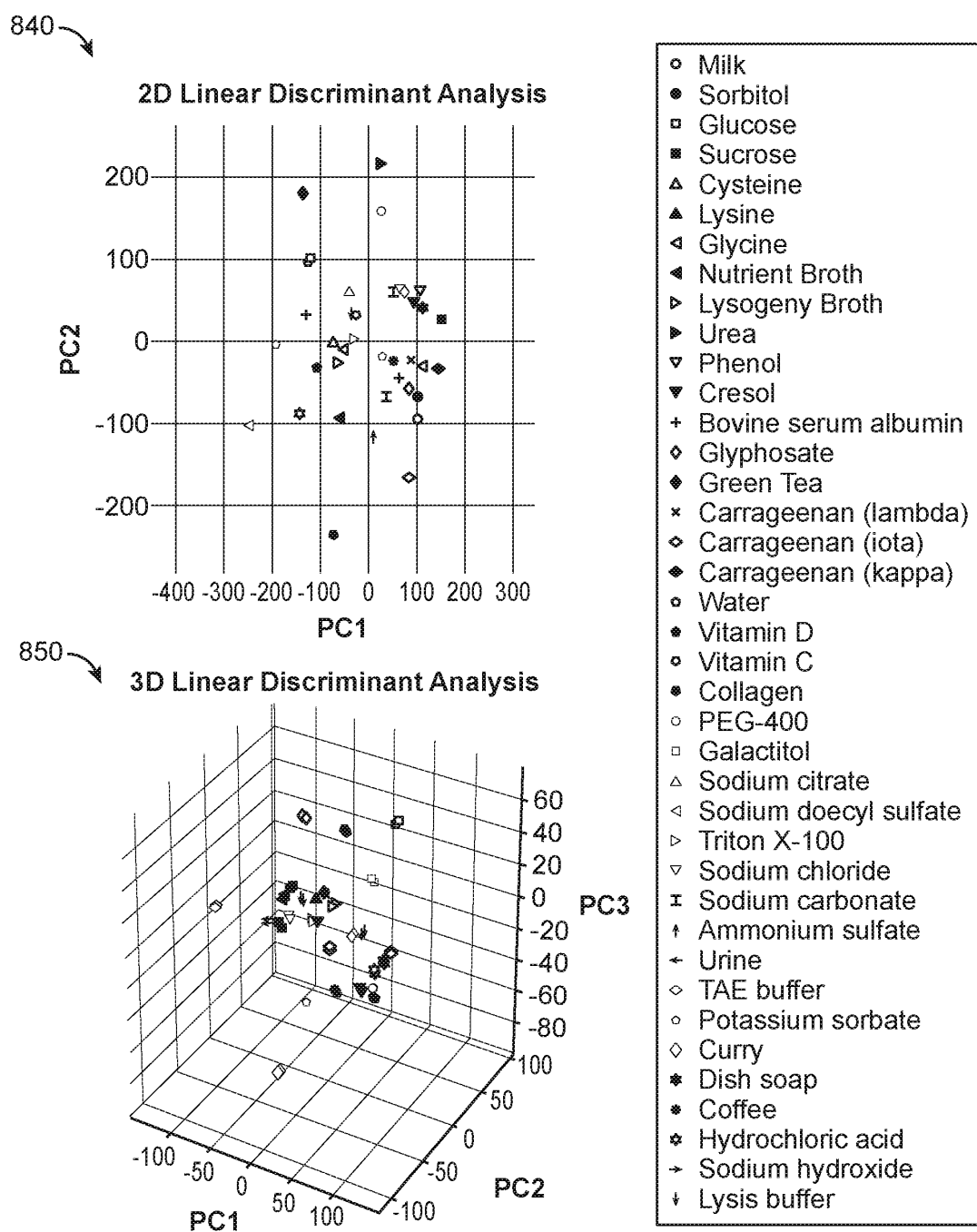


FIG. 14

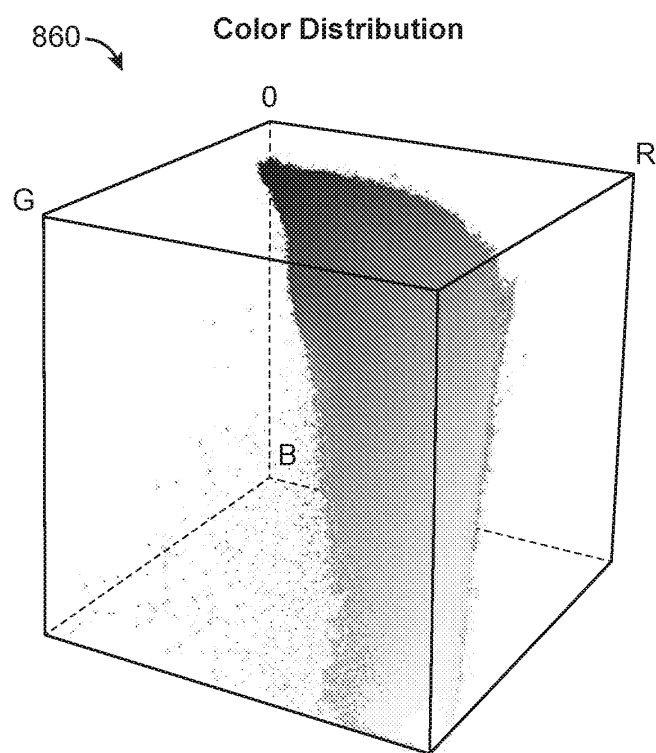


FIG. 14 (Cont.)

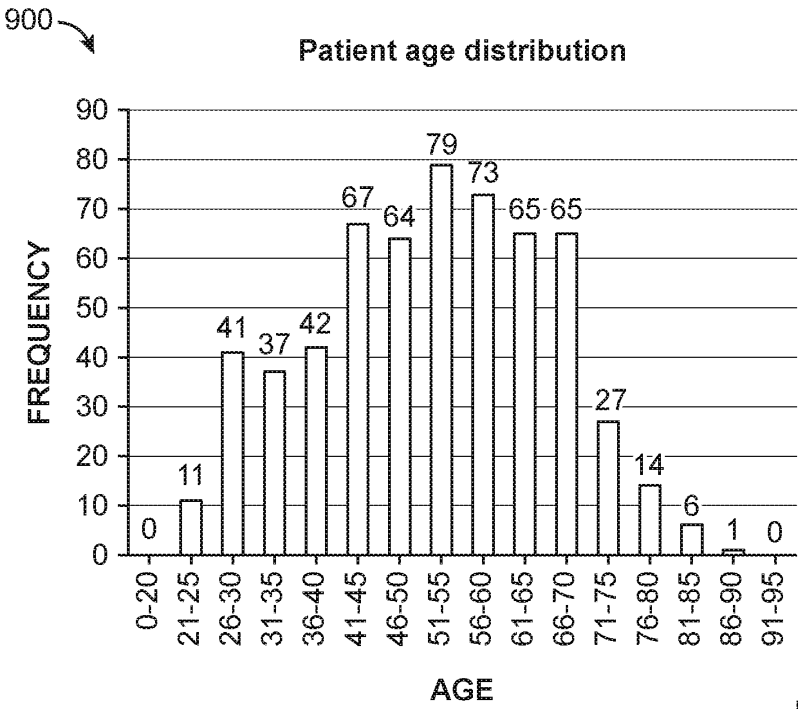


FIG. 15A

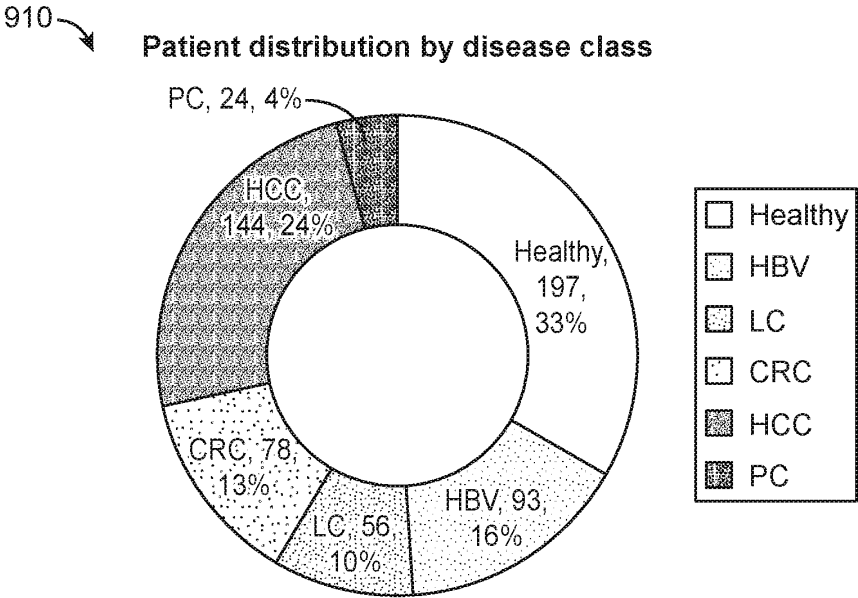


FIG. 15B

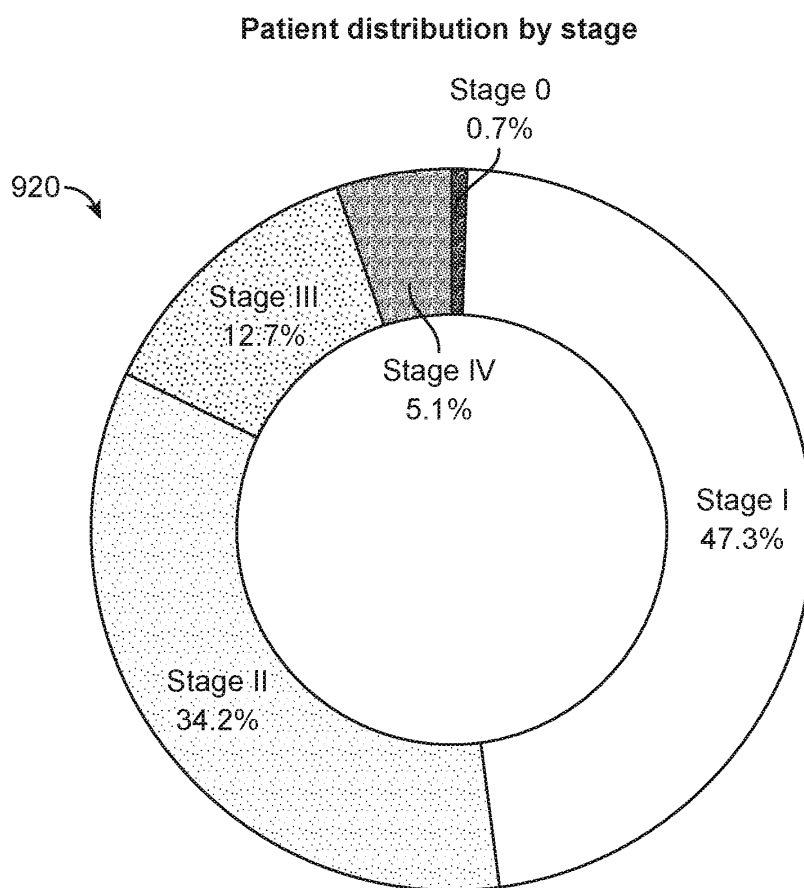


FIG. 15C

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930 Patient distribution by disease class, age and gender

<i>Age Bin</i>	<i>Healthy</i>	<i>HBV</i>	<i>LC</i>	<i>CRC</i>	<i>HCC</i>	<i>PC</i>
0-20	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
21-25	4 (2%)	7 (8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
26-30	19 (10%)	21 (23%)	0 (0%)	0 (0%)	1 (1%)	0 (0%)
31-35	20 (10%)	12 (13%)	0 (0%)	2 (3%)	3 (2%)	0 (0%)
36-40	15 (8%)	17 (18%)	2 (4%)	1 (1%)	7 (5%)	0 (0%)
41-45	33 (17%)	17 (18%)	1 (2%)	2 (3%)	14 (10%)	0 (0%)
46-50	29 (15%)	4 (4%)	5 (9%)	8 (10%)	18 (13%)	0 (0%)
51-55	25 (13%)	5 (5%)	12 (21%)	11 (14%)	25 (17%)	1 (4%)
56-60	21 (11%)	2 (2%)	13 (23%)	14 (18%)	21 (15%)	2 (8%)
61-65	16 (8%)	4 (4%)	14 (25%)	10 (13%)	18 (13%)	3 (13%)
66-70	9 (5%)	1 (1%)	7 (13%)	14 (18%)	25 (17%)	9 (38%)
71-75	4 (2%)	0 (0%)	2 (4%)	11 (14%)	7 (5%)	3 (13%)
76-80	1 (1%)	3 (3%)	0 (0%)	4 (5%)	2 (1%)	4 (17%)
81-85	1 (1%)	0 (0%)	0 (0%)	1 (1%)	3 (2%)	1 (4%)
86-90	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)
91-95	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	197 (100%)	93 (100%)	56 (100%)	78 (100%)	144 (100%)	24 (100%)

932

<i>Gender</i>	<i>Healthy</i>	<i>HBV</i>	<i>LC</i>	<i>CRC</i>	<i>HCC</i>	<i>PC</i>
Female	35 (18%)	23 (25%)	36 (64%)	30 (38%)	33 (23%)	0 (0%)
Male	162 (82%)	70 (75%)	20 (36%)	48 (62%)	111 (77%)	24 (100%)
Total	197 (100%)	93 (100%)	56 (100%)	78 (100%)	144 (100%)	24 (100%)

FIG. 15D

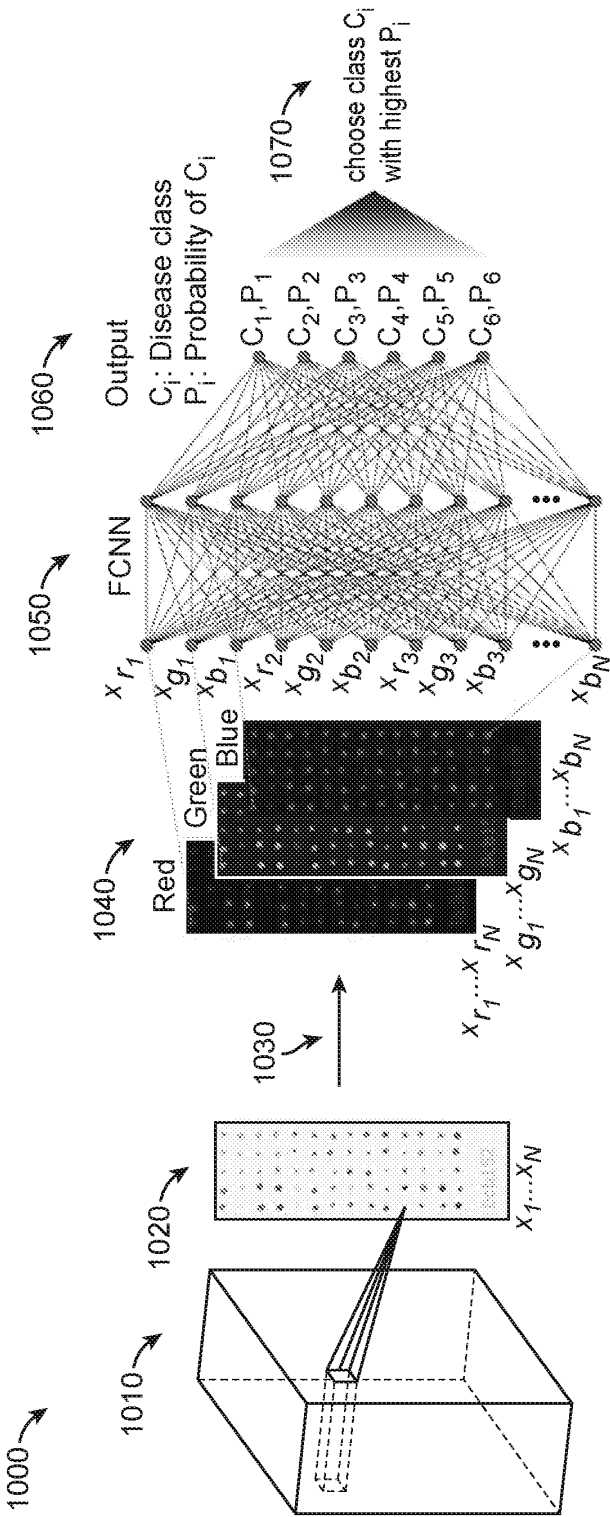


FIG. 16

1400 →

	CRC	HBV	HCC	LC	PC	HEA
Specificity	95.3%	97.3%	90.9%	97.5%	99.4%	91.9%
Sensitivity	53.3%	88.2%	77.1%	87.5%	54.2%	93.5%
PPV	64.5%	88.2%	75.0%	81.7%	81.3%	87.8%
NPV	93.4%	97.8%	92.5%	98.7%	98.1%	96.5%
# of Patients	75	93	144	56	24	200
Proportion	12.7%	15.7%	24.3%	9.5%	4.1%	33.8%

1410 →

Predicted Class						
True Class	CRC	HBV	HCC	LC	PC	HEA
	0.533	0.027	0.320	0.027	0.000	0.093
	0.011	0.882	0.065	0.011	0.000	0.032
	0.097	0.056	0.771	0.049	0.000	0.028
	0.036	0.018	0.054	0.875	0.000	0.018
	0.000	0.000	0.000	0.000	0.542	0.458
	0.025	0.000	0.020	0.005	0.015	0.935

1420 →

	Cancer	HBV	HEA
Specificity	91.0%	98.7%	94.4%
Sensitivity	92.3%	87.1%	91.0%
PPV	91.4%	93.1%	89.7%
NPV	92.1%	97.6%	95.4%
# of Patients	299	93	200
Proportion	50.5%	15.7%	33.8%

1430 →

Predicted Class			
True Class	Cancer	HBV	HEA
	0.923	0.020	0.057
	0.086	0.871	0.043
	0.090	0.000	0.910

FIG. 17A

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1500

Breakdown of misclassification involving healthy individuals

Class	# of Patients	False Negatives Disease misclassified as Healthy		False Positives Healthy misclassified as Disease	
		Classes separate	Cancers combined	Classes separate	Cancers combined
HBV	93	3	4	0	0
CRC ¹	75	7	3	5	
HCC	144	4	1	4	18
LC	56	1	0	1	
PC	24	11	13	3	
Total	392	26	21	13	18

FIG. 17B

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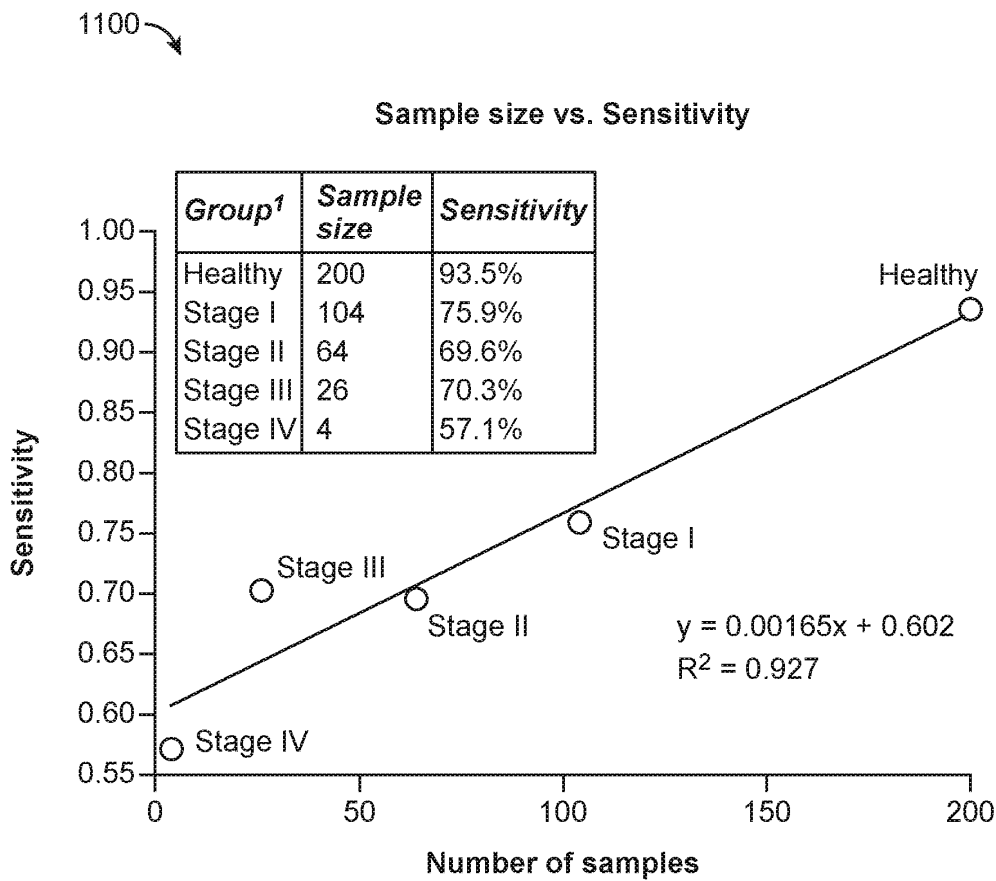
1600True positives¹ by cancer type and stage

<i>Stage (AJCC 8th Ed)</i>	<i>CRC²</i>	<i>HCC</i>	<i>LC</i>	<i>PC³</i>	<i>Total</i>
0			2 (2)		2 (2)
I	8 (18)	57 (74)	39 (45)	1 (1)	105 (138)
II	17 (32)	45 (58)	2 (2)	3 (8)	67 (100)
III	15 (23)	6 (8)	5 (6)		26 (37)
IV	0 (2)	3 (4)	1 (1)	2 (8)	6 (15)
Total	40 (75)	111 (144)	49 (56)	6 (17)	206 (292)

1602Sensitivity¹ by cancer type and stage

<i>Stage (AJCC 8th Ed)</i>	<i>CRC²</i>	<i>HCC</i>	<i>LC</i>	<i>PC³</i>	<i>Total</i>
0			100.0%		100.0%
I	44.4%	77.0%	86.7%	100.0%	76.1%
II	53.1%	77.6%	100.0%	37.5%	67.0%
III	65.2%	75.0%	83.3%		70.3%
IV	0.0%	75.0%	100.0%	25.0%	40.0%
Total	53.3%	77.1%	87.5%	35.3%	70.5%

FIG. 17C



¹ Cancer stage data do not include prostate cancer

FIG. 17D

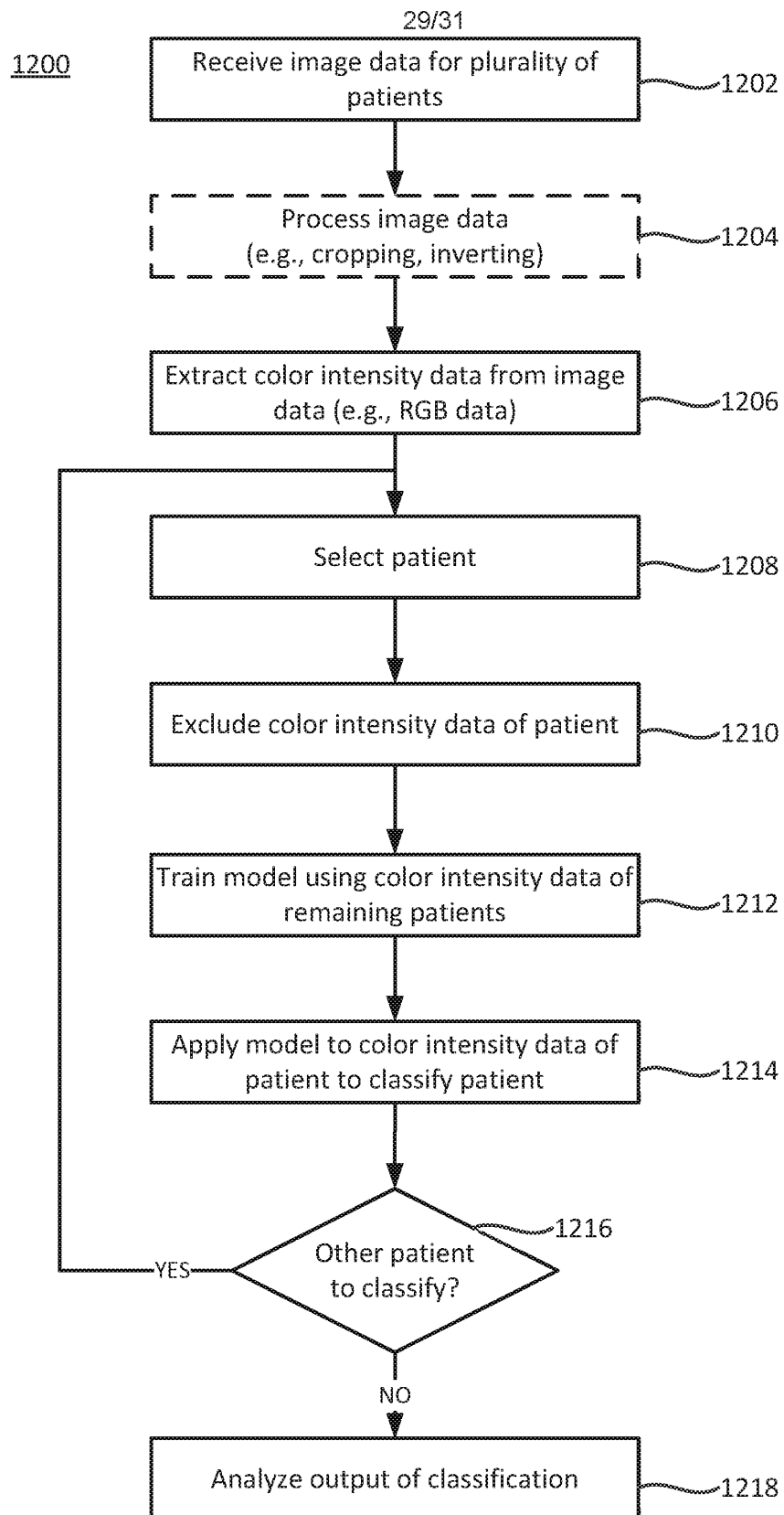


FIG. 18

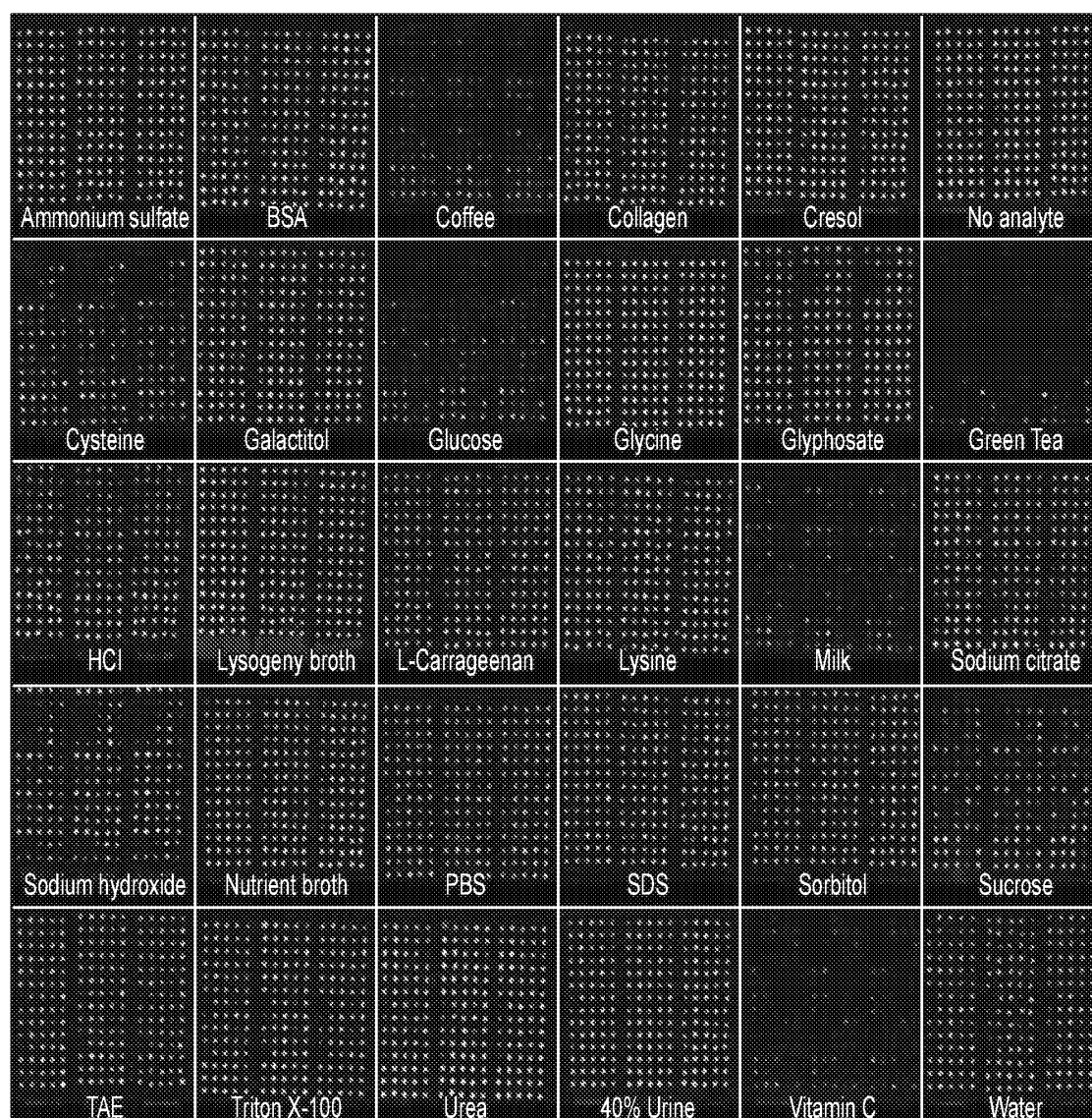


FIG. 19

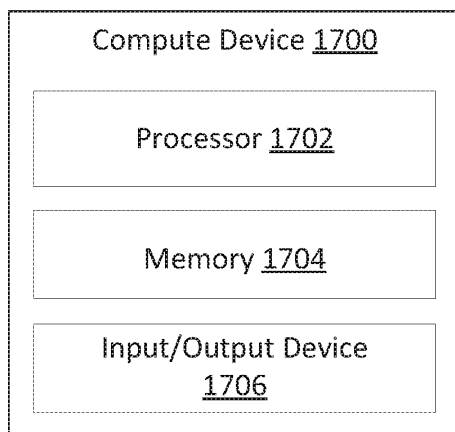


FIG. 20