

Supplemental Online Content

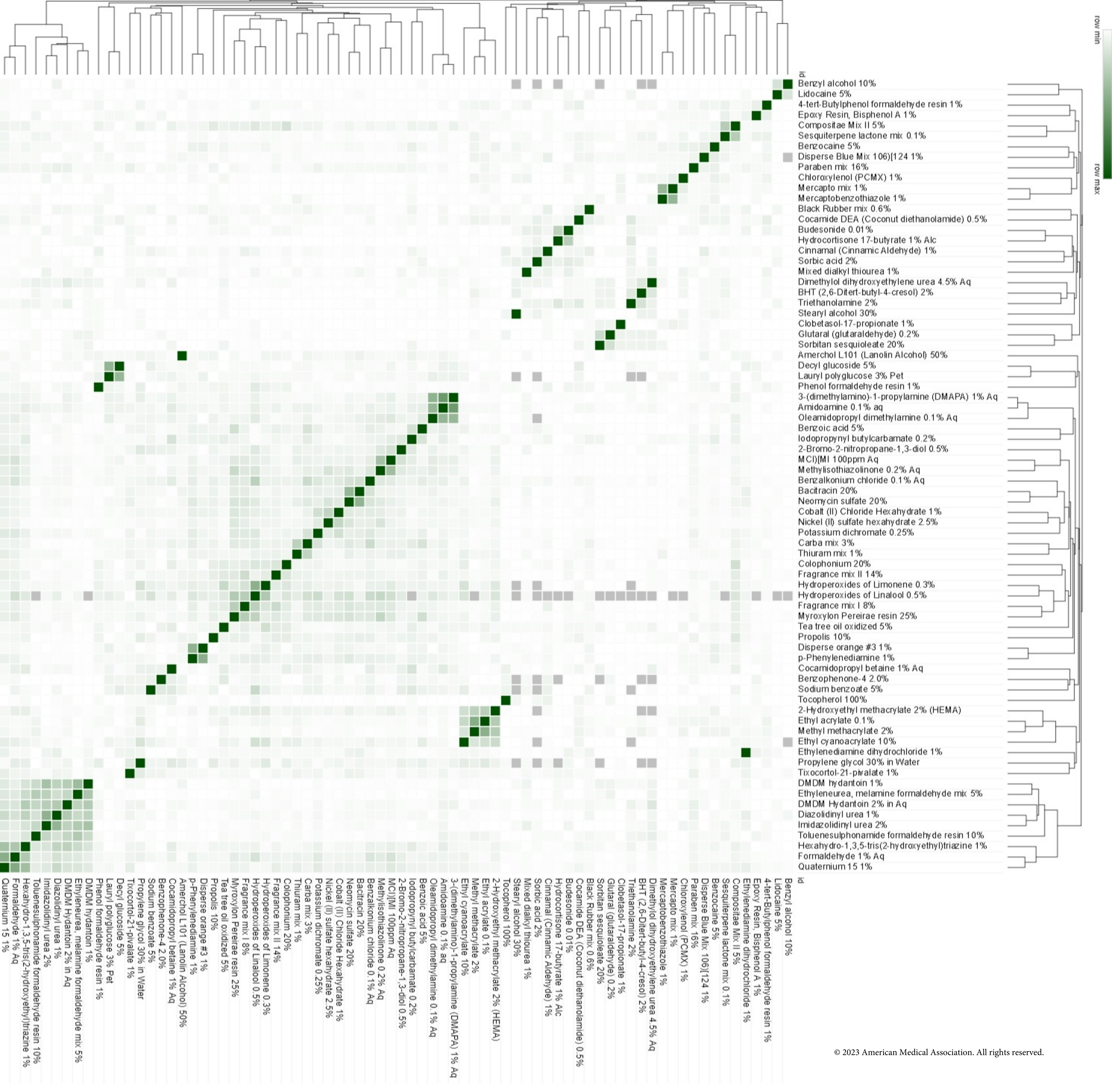
Yang YW, Yiannias JA, Voss MM, et al. Systematic Identification of Copositivity Groups in Standard Series Patch Testing Through Hierarchical Clustering. *JAMA Dermatol*. Published online August 2, 2023. doi:10.1001/jamadermatol.2023.2352

eFigure 1.

eFigure 2. CAB-CF Copositivity Rate

eTable 2. Mayo Clinic Standard Series Patch Test Results 2012-2021

This supplemental material has been provided by the authors to give readers additional information about their work.



Number of patients positive to methyl methacrylate and tested against nickel: 63

Number of patients positive to both methyl methacrylate and nickel: 21

Co-positivity Rate: $\frac{21}{63} = 33.33\%$

Nickel positivity: 17.5%

Methyl methacrylate positivity: 1.17%

Contact Allergen Background Correction Factor (CAB-CF) : $\frac{17.5}{1.17} = 14.96$

CAB-CF Co-positivity (background corrected co-positivity rate): $\frac{\text{Co-positivity Rate}}{\text{CAB-CF}} = \frac{33.33\%}{14.96} = 2.23\%$

Allergen	Total	Positive	Positive %
2-Bromo-2-nitropropane-1,3-diol 0.5%	5300	162	3.06%
2-Hydroxyethyl methacrylate 2% (HEMA)	3461	141	4.07%
3-(dimethylamino)-1-propylamine (DMAPA) 1% Aq	4013	98	2.44%
4-tert-Butylphenol formaldehyde resin 1%	5462	37	0.68%
Amerchol L101 (Lanolin Alcohol) 50%	3863	63	1.63%
Amidoamine 0.1% aq	5367	132	2.46%
Bacitracin 20%	5463	326	5.97%
Benzalkonium chloride 0.1% Aq	5301	326	6.15%
Benzocaine 5%	5678	71	1.25%
Benzoic acid 5%	5537	183	3.31%
Benzophenone-4 2.0%	1920	25	1.30%
Benzyl alcohol 10%	2038	8	0.39%
BHT (2,6-Ditert-butyl-4-cresol) 2%	5302	8	0.15%
Black Rubber mix 0.6%	5292	46	0.87%
Budesonide 0.01%	5481	32	0.58%
Carba mix 3%	5461	260	4.76%
Cetyl Alcohol 5%	5301	3	0.06%
Chloroxylenol (PCMX) 1%	5410	23	0.43%
Cinnamal (Cinnamic Aldehyde) 1%	5367	41	0.76%
Clobetasol-17-propionate 1%	5330	15	0.28%
Cobalt (II) Chloride Hexahydrate 1%	5849	476	8.14%
Cocamide DEA (Coconut diethanolamide) 0.5%	5316	37	0.70%
Cocamidopropyl betaine 1% Aq	5475	96	1.75%
Colophonium 20%	5677	133	2.34%
Compositae Mix II 5%	5470	112	2.05%
Decyl glucoside 5%	3711	50	1.35%
Desoximetasone 1%	3671	4	0.11%

Diazolidinyl urea 1%	5468	64	1.17%
Dimethylol dihydroxyethylene urea 4.5% Aq	5305	15	0.28%
Disperse Blue Mix 106/124 1%	4219	37	0.88%
Disperse orange #3 1%	4235	98	2.31%
DMDM hydantoin 1%	5302	35	0.66%
DMDM Hydantoin 2% in Aq	5303	44	0.83%
Epoxy Resin, Bisphenol A 1%	5609	38	0.68%
Ethyl acrylate 0.1%	5721	78	1.36%
Ethyl cyanoacrylate 10%	3699	97	2.62%
Ethylenediamine dihydrochloride 1%	5495	74	1.35%
Ethyleneurea, melamine formaldehyde mix 5%	5306	35	0.66%
Formaldehyde 1% Aq	5473	231	4.22%
Fragrance mix I 8%	5677	361	6.36%
Fragrance mix II 14%	5465	156	2.85%
Glutaral (glutaraldehyde) 0.2%	5508	15	0.27%
Hexahydro-1,3,5-tris(2-hydroxyethyl)triazine 1%	5302	110	2.07%
Hydrocortisone 17-butyrate 1% Alc	5327	13	0.24%
Hydroperoxides of Limonene 0.3%	3488	132	3.78%
Hydroperoxides of Linalool 0.5%	782	67	8.57%
Imidazolidinyl urea 2%	5468	44	0.80%
Iodopropynyl butylcarbamate 0.2%	5485	123	2.24%
Lauryl polyglucose 3% Pet	2786	36	1.29%
Lidocaine 5%	5514	24	0.44%
MCI/MI 100ppm Aq	5452	311	5.70%
Mercapto mix 1%	5462	16	0.29%
Mercaptobenzothiazole 1%	5478	23	0.42%
Methyl methacrylate 2%	5795	68	1.17%
Methylisothiazolinone 0.2% Aq	4295	526	12.25%

Mixed dialkyl thiourea 1%	5300	38	0.72%
Myroxylon Pereirae resin 25%	5684	573	10.08%
Neomycin sulfate 20%	5463	422	7.72%
Nickel (II) sulfate hexahydrate 2.5%	5862	1026	17.50%
Oleamidopropyl dimethylamine 0.1% Aq	3365	123	3.66%
p-Phenylenediamine 1%	5469	253	4.63%
Paraben mix 16%	5462	84	1.54%
Phenol formaldehyde resin 1%	5333	44	0.83%
Phenoxyethanol 1%	1777	2	0.11%
Potassium dichromate 0.25%	5668	285	5.03%
Propolis 10%	5288	136	2.57%
Propylene glycol 30% in Water	1971	39	1.98%
Quaternium 15 1%	5471	177	3.24%
Sesquiterpene lactone mix 0.1%	5496	41	0.75%
Sodium benzoate 5%	3486	67	1.92%
Sorbic acid 2%	5492	14	0.25%
Sorbitan sesquioleate 20%	5278	16	0.30%
Stearyl alcohol 30%	5301	13	0.25%
Tea tree oil oxidized 5%	5052	78	1.54%
Thiuram mix 1%	5462	152	2.78%
Tixocortol-21-pivalate 1%	5688	101	1.78%
Tocopherol 100%	5300	22	0.42%
Toluenesulphonamide formaldehyde resin 10%	5325	40	0.75%
Triamcinolone Acetonide 1%	5691	4	0.07%
Triethanolamine 2%	5302	16	0.30%

Table S2: Mayo Clinic Standard Series Patch Test Results 2012-2021