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Intracellular reactive oxygen species scavenging potential of *Benincasa hispida* Cogn. confection

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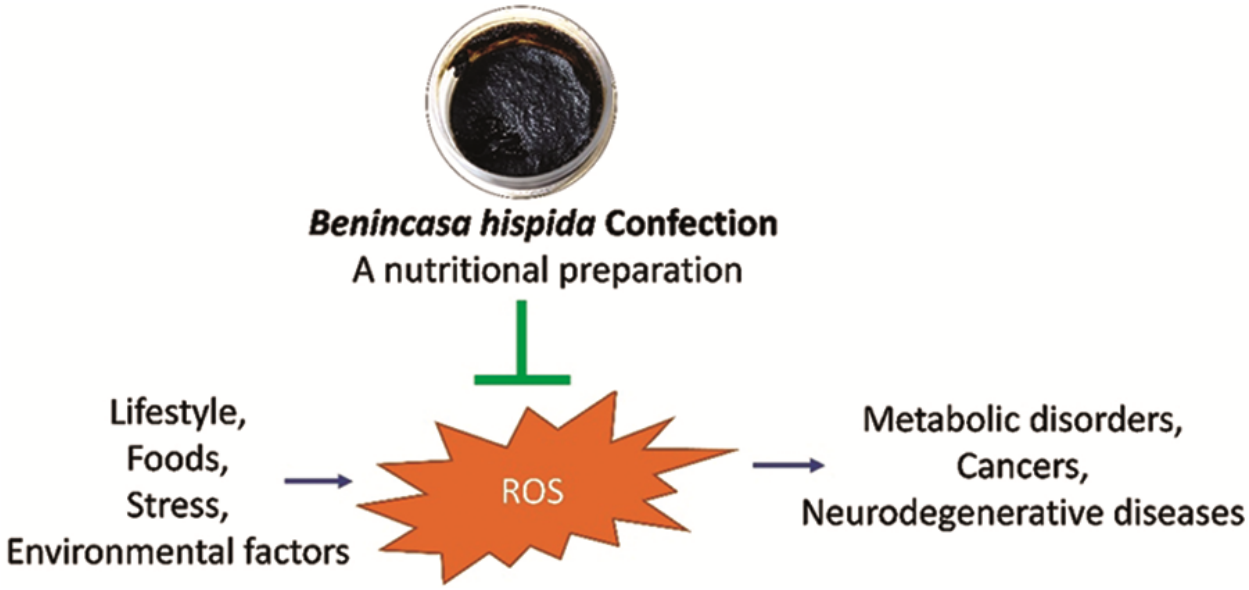
Supplementary Data



Graphical Abstract

Supplementary Table S1 — Details of Phytoactive compounds found in alcoholic extract of *Cinnamomum tamala* Nees. (Marich)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	174611	10313	0.04809	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	1007367	28963	0.01218	Reduces mast cell-derived inflammatory allergic, Psynapicaci, responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Tannic acid	C76H52O46	356652	19089	0.01576	Immunomodulator[6]
4.	Rutin	C27H30O16	279693	8017	0.00227	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
5.	P-coumaric acid	HOC6H4CH =CHCO2H	239782	10930	0.00396	Antioxidant properties[8]
6.	Synapic acid	C11H12O5	191719	6423	0.00316	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
7.	Feuralic	C10H10O4	134759	4794	0.00151	Antioxidant property[10]
8.	Qurecetine	C15H10O7	75929	3705	0.00235	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
9.	Salicylic acid	C6H4(OH) CO2H	127650	4423	0.05208	Anti-inflammatory, Antioxidative Properties[12].

Supplementary Table S2 — Details of Phytoactive compound found in alcoholic extract of *Cinnamomum zeylanicum* (Tvaka).

S. No.	Phenolic compound	FORMULA	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	29494	2773	0.00812	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	112519	8504	0.00229	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	43294	3031	0.00123	antioxidant profile[5]
4.	Tannic acid	C76H52O46	112519	8504	0.00514	Immunomodulator[6]
5.	Rutin	C27H30O16	159580	5000	0.00129	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
6.	P-coumaric acid	HOC6H4CH =CHCO2H	70580	3683	0.00117	Antioxidant properties[8]
7.	Synapic acid	C11H12O5	221071	4596	0.00365	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
8.	Feuralic	C10H10O4	426442	3126	0.00102	Antioxidant property[10]
9.	Qurecetine	C15H10O7	462015	15831	0.00322	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
10.	Salicylic acid	C6H4(OH)CO2H	46658	2326	0.01775	Anti-inflammatory, Antioxidative properties[12].

Supplementary Table S3 — Details of Phytoactive compound found in alcoholic extract of *Cuminum cyminum* Linn (Jiraka)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	29494	2773	0.00812	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	112519	8504	0.00229	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	43294	3031	0.00123	antioxidant profile[5]
4.	Tannic acid	C76H52O46	112519	8504	0.00514	Immunomodulator[6]
5.	Rutin	C27H30O16	159580	5000	0.00129	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
6.	P-coumaric acid	HOC6H4CH=CHCO2H	70580	3683	0.00117	Antioxidant properties[8]
7.	Synapic acid	C11H12O5	221071	4596	0.00365	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
8.	Feuralic	C10H10O4	426442	3126	0.00102	Antioxidant property[10]
9.	Qurecetine	C15H10O7	462015	15831	0.00322	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
10.	Salicylic acid	C6H4(OH)CO2H	46658	2326	0.01775	Anti-inflammatory, Antioxidative Properties.[12]

Supplementary Table S4 — Details of Phytoactive compound found in alcoholic extract of *Piper longum* Linn (Pippali)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	85384	11015	0.02351	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	279613	23852	0.00583	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	212268	7767	0.00369	antioxidant profile[5]
4.	Rutin	C27H30O16	64123	6911	0.00065	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
5.	P-coumaric acid	HOC6H4CH =CHCO2H	173114	7409	0.00286	Antioxidant properties[8]
6.	Synapic acid	C11H12O5	172852	7231	0.00326	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging [9]
7.	Feuralic	C10H10O4	286246	7801	0.0032	Antioxidant property[10]
8.	Qurecetin	C15H10O7	336436	12230	0.00234	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
9.	Salicylic acid	C6H4(OH)CO2H	132169	5665	0.13548	Anti-inflammatory, Antioxidative properties[12].
10.	α-Linolenic acid	C18 H30 O2	27822	7840	0.12736	Anti-inflammatory, Immunoregulatory, Reduces BALF level of IgE[13].
11.	Myristicin	C11 H12 O3	173114	7409	0.06709	Anti-inflammatory (Reduces TNF alpha and IL-6, Antioxidant[14].

Supplementary Table S5 — Details of Phytoactive compound found in alcoholic extract of *Cinnamomum tamala* Nees (Tejapatra).

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	55945	5240	0.01541	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	96279	13376	0.00541	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	187202	7994	0.00325	antioxidant profile[5]
4.	Tannic acid	C76H52O46	96279	13376	0.00669	Immunomodulator[6]
5.	Rutin	C27H30O16	424245	13085	0.00344	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
6.	P-coumaric acid	HOC6H4CH =CHCO2H	563840	18818	0.00931	Antioxidant properties[8]
7.	Synapic acid	C11H12O5	574859	15776	0.00949	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
8.	Feuralic	C10H10O4	89929	8611	0.00507	Antioxidant Property[10]
9.	Qurecetin	C15H10O7	997536	17824	0.00695	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
10.	Salicylic acid	C6H4(OH)CO2H	232875	8921	0.21098	Anti-inflammatory, Antioxidative Properties[12].

Supplementary Table S6 — Details of Phytoactive compound found in alcoholic extract of SHUNTHI *Zingiber officinale* Roxb. (Shunthi)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	125561	13483	0.03458	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	147149	11643	0.00089	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	48761	3003	0.00098	antioxidant profile [5]
4.	Rutin	C27H30O16	47888	2900	0.00039	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].
5.	P-coumaric acid	HOC6H4CH=CHCO2H	1496	163	0.00015	Antioxidant properties [8]
6.	Synapic acid	C11H12O5	29879	983	0.00049	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
7.	Feuralic	C10H10O4	10360	506	0.00012	Antioxidant property[10]
8.	Qurecetin	C15H10O7	101845	3158	0.00071	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
9.	Salicylic acid	C6H4(OH)CO2H	4734	155	0.00193	Anti-inflammatory, Antioxidative properties[12]

Supplementary Table S7 — Details of Phytoactive compound found in alcoholic extract of *Eletteria cadamomum* (Aila)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Shikimic acid	C7H10O5	47905	2562	0.01328	Ameliorates DSS-Induced Ulcerative Colitis[1], Inhibits Osteoclastogenesis[2], effective against influenza virus[3]
2.	Gallic acid	C7H6O5	48761	3003	0.001452	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine production in Mast Cells[4].
3.	Trans chlorogenic acid	C16H18O9	387261	13733	0.00187	antioxidant profile[5]
4.	Tannic acid	C76H52O46	36220	2161	0.00519	Immunomodulator[6]
5.	P-coumaric acid	HOC6H4CH =CHCO2H	46238	3525	0.00848	Antioxidant properties[8]
6.	Synapic acid	C11H12O5	1496	163	0.00741	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
7.	Feuralic	C10H10O4	78692	5612	0.00609	Antioxidant property[10]
8.	Qurecetin	C15H10O7	4734	155	0.00739	Inhibits the release of histamine and pro-inflammatory mediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the pulmonary parenchyma, Potential to reduce airway hyperresponsiveness, bronchial hyperactivity and mucus production[11].
9.	Salicylic acid	C6H4(OH)CO2H	212342	8623	0.00791	Anti-inflammatory, Antioxidative properties[12].

Supplementary Table S8 — Phytoactive compounds detected in final product (BHC Confection)

S. No.	Phenolic compound	Formula	Area	Height	Concentration (mg/mL)	Action
1.	Gallic acid	C7H6O5	167857	5445	0.00149	Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells[4].
2.	Trans chlorogenic acid	C16H18O9	297062	14000	0.09166	antioxidant profile[5]
3.	P-coumaric acid	HOC6H4CH=CHCO2H	87446	2440	0.00015	Antioxidant properties[8]
4.	Synapic acid	C11H12O5	106171	1836	0.00013	Antioxidant, effective against oxidative Stress-Induced Diseases and Aging[9]
5.	Rutin	C27H30O16	107111	4354	0.00274	Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF[7].

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