

Indian Journal of Traditional Knowledge Vol 24(1), January 2025, pp 16-22 DOI: 10.56042/ijtk.v24i1.11958



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

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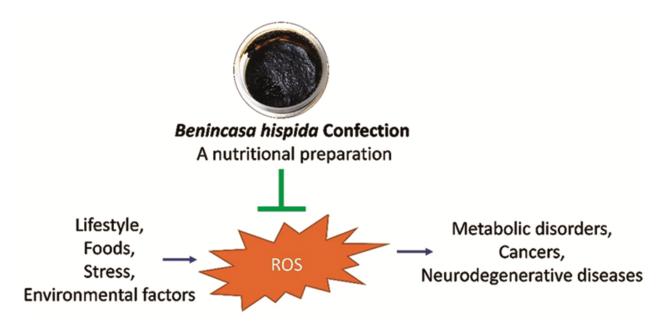
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Received 25 June 2024; revised 09 December 2024; accepted 26 December 2024

Supplementary Data



Graphical Abstract

Su	pplementary Table	S1 — Details of Ph	ytoactive c	ompounds f	ound in alco	holic extrac	et of Cinnamomum tamala Nees. (Marich)
S. No.	Phenolic compound	Formula	Area	Height	Concentr (mg/mL)		ion
1.	Shikimic acid	C7H10O5	174611	10313	0.04809	Inhi	eliorates DSS-Induced Ulcerative Colitis ¹ , bits Osteoclastogenesis ² , effective against nenza virus ³
2.	Gallic acid	C7H6O5	1007367	28963	0.01218	Red Psyr Rele	uces mast cell-derived inflammatory allergic, napicaci, responses, Inhibits Histamine ease and Pro-inflammatory Cytokine duction in Mast Cells ⁴ .
3.	Tannic acid	C76H52O46	356652	19089	0.01576		nunomodulator ⁶
4.	Rutin	C27H30O16	279693	8017	0.00227		uced airway hyperresponsiveness, Reduced levels in serum and BALF ⁷ .
5.	P-coumaric acid	HOC6H4CH =CHCO2H	239782	10930	0.00396	Anti	ioxidant properties ⁸
6.	Synapic acid	C11H12O5	191719	6423	0.00316	Indu	ioxidant, effective against oxidative Stress- aced Diseases and Aging ⁹
7.	Feuralic	C10H10O4	134759	4794	0.00151	Ant	ioxidant property ¹⁰
8.	Qurecetine	C15H10O7	75929	3705	0.00235	Inhi	bits the release of histamine and pro-
						infla IL-8 bloc the p airw	ammatory mediators (TNF-α, IL-1β, IL-6 and β) from mast cells, Reduces eosinophils in the bd, bronchoalveolar lavage fluid (BALF) and pulmonary parenchyma, Potential to reduce by hyperresponsiveness, bronchial
9.	Salicylic acid	С6Н4(ОН) СО2Н	127650	4423	0.05208		eractivity and mucus production ¹¹ . i-inflammatory, Antioxidative Properties ¹² .
S	upplementary Tab	le S2 — Details of P	hytoactive	compound	found in alco	oholic extra	ct of Cinnamomum zeylanicum (Tvaka).
S. No.	Phenolic compound	FORMULA		Area	Height	Concentrate (mg/mL)	tion 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 Proinflammatory Cytokine Production in Mast Cells ⁴ .
3.	Trans chlorogen	ic 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. 7.	P-coumaric acid Synapic acid	HOC6H4CH =C C11H12O5	СНСО2Н	70580 221071	3683 4596	0.00117 0.00365	Antioxidant properties ⁸ 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	0.00102	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
10.	Salicylic acid	C6H4(OH)CO2	Н	46658	2326	0.01775	hyperactivity and mucus production ¹¹ . Anti-inflammatory, Antioxidative properties ¹² .

	Supplementary Tac	nc 33 — Details of	Tilytoacti	ve compou	na rouna	in alcoho	olic extract of Cuminum cyminum Linn (Jiraka)
S. No.	Phenolic compound	Formula		Area	Height	Concentration (mg/mL	tration Action L)
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 ac	id C16H18O9		43294	3031	0.00123	
4.	Tannic acid	C76H52O46		112519	8504	0.00514	
5.	Rutin	C27H30O16		159580	5000	0.00129	Reduced IgE levels in serum and BALF ⁷ .
6.	P-coumaric acid	HOC6H4CH=0	CHCO2H	70580	3683	0.00117	
7.	Synapic acid	C11H12O5		221071	4596	0.00365	
0	T 1'	G10H1004		10.61.10	2126	0.00102	Stress-Induced Diseases and Aging ⁹
8.	Feuralic	C10H10O4		426442	3126	0.00102	1 1 3
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)CO2	2H	46658	2326	0.01775	Anti-inflammatory, Antioxidative
							Properties. 12
	Supplementary T	Table S4 — Details	of Phytoa	ctive comp	ound four	nd in alco	pholic extract of <i>Piper longum</i> Linn (Pippali)
S.	Phenolic	Formula	Area	Height	Concen	tration A	Action
No.	compound				(mg/mI	ـ)	
1.	Shikimic acid	C7H10O5	85384	11015	0.0235	C	Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³
2.	Gallic acid	C7H6O5	279613	23852	0.00583	re	Reduces mast cell-derived inflammatory allergic esponses, Inhibits Histamine Release and Pro- nflammatory Cytokine Production in Mast Cells ⁴ .
3.	Trans chlorogenic acid	C16H18O9	212268	7767	0.00369		intioxidant profile ⁵
4.	Rutin	C27H30O16	64123	6911	0.00065	16	Reduced airway hyperresponsiveness, Reduced IgE evels in serum and BALF ⁷ .
5.		HOC6H4CH =CHCO2H	173114	7409	0.00286		Antioxidant properties ⁸
6.	Synapic acid	C11H12O5	172852	7231	0.00326	I	Antioxidant, effective against oxidative Stress- nduced Diseases and Aging ⁹
7.	Feuralic	C10H10O4	286246	7801	0.0032		Antioxidant property ¹⁰
8.	Qurecetin	C15H10O7	336436	12230	0.00234		nhibits the release of histamine and pro-inflammatory
						c b p h	nediators (TNF-α, IL-1β, IL-6 and IL-8) from mast cells, Reduces eosinophils in the blood, bronchoalveolar lavage fluid (BALF) and the culmonary parenchyma, Potential to reduce airway apperresponsiveness, bronchial hyperactivity and nucus 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	0.1273		Anti-inflammatory, Immunoregulatory, Reduces BALF level of IgE ¹³ .
11.	Myristicin	C11 H12 O3	173114	7409	0.06709) A	Anti-inflammatory (Reduces TNF alpha and IL-6, Antioxidant ¹⁴ .

	upplementary Table Phenolic	Formula	Area	Height	Concentration	Action
	compound	CZILIOOS	55045	5240	(mg/mL)	A 1' A DOCT I TITL A'
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 .
5.	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
3.	Feuralic	C10H10O4	89929	8611	0.00507	Antioxidant Property ¹⁰
Э.	Qurecetin	C15H10O7	997536	17824	0.00695	Inhibits the release of histamine and proinflammatory mediators (TNF- α , IL-1 β , 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
10.	Salicylic acid	C6H4(OH)CO2H	222075	0001		hyperactivity and mucus production ¹¹ .
	·	C0114(011)C0211	232875	8921	0.21098	Anti-inflammatory, Antioxidative Properties ¹² .
						Anti-inflammatory, Antioxidative Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi)
Su S.						Properties ¹² .
Su S. No.	pplementary Table S	6 — Details of Phytoactive	compound	found in alc	oholic extract of SF	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² ,
Su S. No. I.	pplementary Table S Phenolic compound	6 — Details of Phytoactive Formula	compound Area	found in alc Height	oholic extract of SF Concentration (mg/mL)	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine
Su No. 11.	pplementary Table S Phenolic compound Shikimic acid Gallic acid	66 — Details of Phytoactive Formula C7H10O5 C7H6O5	compound Area 125561	found in alc Height 13483	oholic extract of SF Concentration (mg/mL) 0.03458	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine
Su S. No. 11.	pplementary Table S Phenolic compound Shikimic acid Gallic acid	66 — Details of Phytoactive Formula C7H10O5 C7H6O5	125561 147149	found in alc Height 13483 11643	oholic extract of SF Concentration (mg/mL) 0.03458	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells ⁴ . antioxidant profile ⁵ Reduced airway hyperresponsiveness,
Su So. No. 11. 22.	pplementary Table S Phenolic compound Shikimic acid Gallic acid Trans chlorogenic acid Rutin P-coumaric acid	6 — Details of Phytoactive Formula C7H10O5 C7H6O5 C16H18O9 C27H30O16 HOC6H4CH=CHCO2H	compound Area 125561 147149 48761 47888 1496	found in alc Height 13483 11643 3003 2900 163	oholic extract of SF Concentration (mg/mL) 0.03458 0.00089 0.00098 0.00039	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells ⁴ . antioxidant profile ⁵ Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF ⁷ Antioxidant properties ⁸
Su So. No. 1. 2.	pplementary Table S Phenolic compound Shikimic acid Gallic acid Trans chlorogenic acid Rutin	66 — Details of Phytoactive Formula C7H10O5 C7H6O5 C16H18O9 C27H30O16	125561 147149 48761 47888	found in alc Height 13483 11643 3003 2900	oholic extract of SF Concentration (mg/mL) 0.03458 0.00089 0.00098	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells ⁴ . antioxidant profile ⁵ Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF ⁷ Antioxidant properties ⁸ Antioxidant, effective against oxidative Stress-Induced Diseases and Aging ⁹
Su S. No. 1. 2. 33. 44. 55. 65.	pplementary Table S Phenolic compound Shikimic acid Gallic acid Trans chlorogenic acid Rutin P-coumaric acid	6 — Details of Phytoactive Formula C7H10O5 C7H6O5 C16H18O9 C27H30O16 HOC6H4CH=CHCO2H	compound Area 125561 147149 48761 47888 1496	found in alc Height 13483 11643 3003 2900 163	oholic extract of SF Concentration (mg/mL) 0.03458 0.00089 0.00098 0.00039	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells ⁴ . antioxidant profile ⁵ Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF ⁷ Antioxidant properties ⁸ Antioxidant, effective against oxidative
	pplementary Table S Phenolic compound Shikimic acid Gallic acid Trans chlorogenic acid Rutin P-coumaric acid Synapic acid	66 — Details of Phytoactive Formula C7H10O5 C7H6O5 C16H18O9 C27H30O16 HOC6H4CH=CHCO2H C11H12O5	compound Area 125561 147149 48761 47888 1496 29879	found in alc Height 13483 11643 3003 2900 163 983	oholic extract of SF Concentration (mg/mL) 0.03458 0.00089 0.00098 0.00039 0.00015 0.00049	Properties ¹² . HUNTHI Zingiber officinale Roxb. (Shunthi) Action Ameliorates DSS-Induced Ulcerative Colitis ¹ , Inhibits Osteoclastogenesis ² , effective against influenza virus ³ Reduces mast cell-derived inflammatory allergic responses, Inhibits Histamine Release and Pro-inflammatory Cytokine Production in Mast Cells ⁴ . antioxidant profile ⁵ Reduced airway hyperresponsiveness, Reduced IgE levels in serum and BALF ⁷ Antioxidant properties ⁸ Antioxidant, effective against oxidative Stress-Induced Diseases and Aging ⁹

	Supplementary Ta	ble S7 — Details of Phyto	active comp	ound found	in alcoholic extra	ct of <i>Eletteria cadamomum</i> (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 Proinflammatory 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	С6Н4(ОН)СО2Н	212342	8623	0.00791	Anti-inflammatory, Antioxidative properties ¹² .
	Supple	ementary Table S8 — Phyt	oactive com	pounds dete	ected in final prod	uct (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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