ACTAZIN®

Anagenix.

Actazin® & Green Kiwifruit Clinical Science Summary

Summary of clinical science conducted on Actazin®, other kiwifruit powders and whole green kiwifruit.

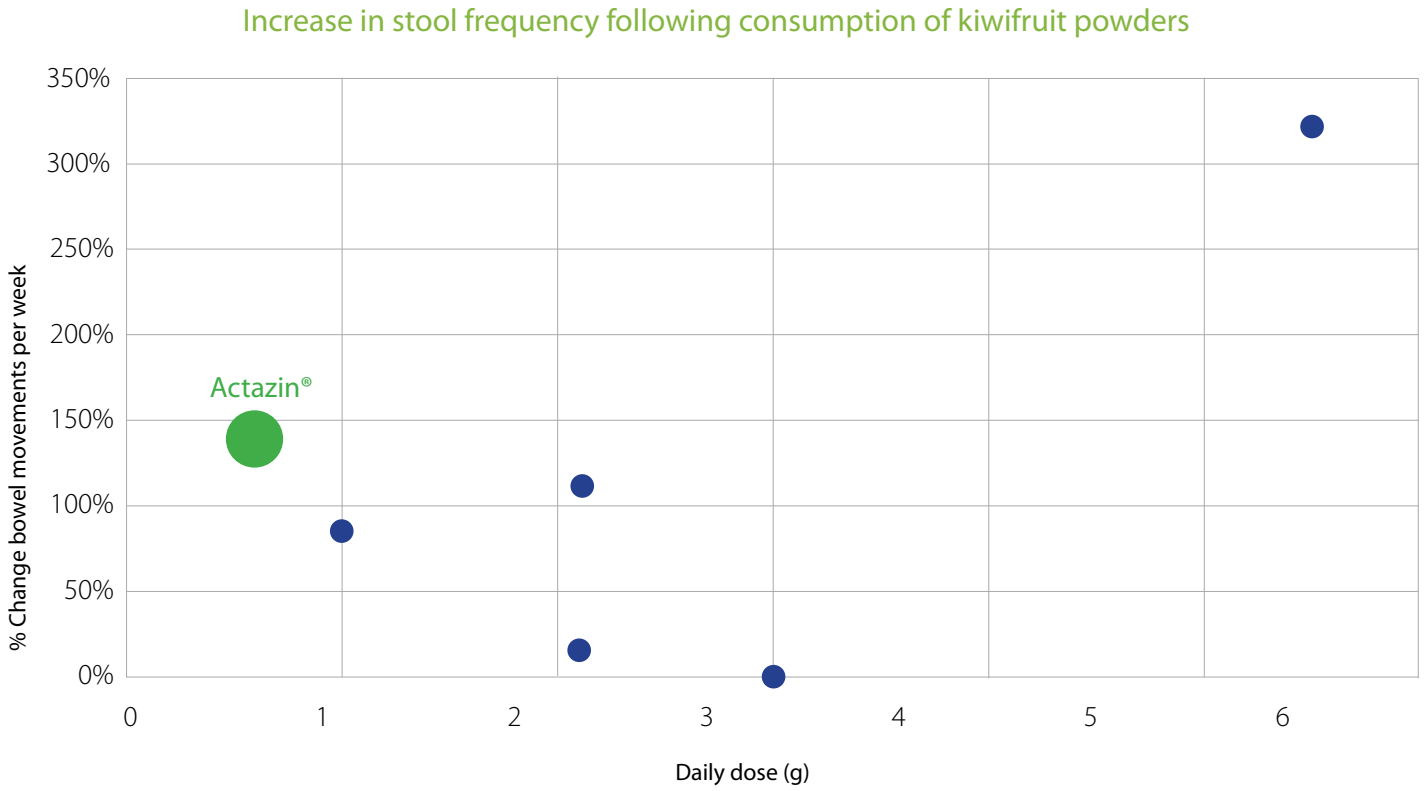
Product	Daily dose	Intervention period	RCT	Population			n	Clinical Endpoint Key Results			Ref
				Healthy - no constipation	Healthy - mild constipation	IBS-C / FC		Stool Form	Stool frequency	Symptoms / Ease / Comfort	
Actazin®	600 mg	4 weeks	√	√			19	⊘	●	⊘	[1]
	600 mg	4 weeks	√			√	9	⊘	●	⊘	
	2,400 mg	4 weeks	√	√			19	⊘	●	⊘	
Actazin®	600 mg	4 weeks	√		√		43	●	●	●	[2]
Kiwifruit extract	1,000 mg	3 weeks	√		√		32	⊘	●	●	[3]
Kiwifruit powder	2,160 mg	1 week	√		√		28	●	●	●	[4]
Kiwifruit powder	6 capsules	4 weeks	X		√		41	●	●	●	[5]
Kiwifruit powder	3,000 mg	6 weeks	√		√		11	⊘	⊘	●	[6]
Kiwifruit powder	5,500 mg	4 weeks	√		√		39	●	●	●	[7]
Whole kiwifruit	2 fruit	2 weeks	√	√			11	●	●	⊘	[8]
Whole kiwifruit	2 fruit	4 weeks	√			√	121	●	●	●	[9, 10, 11, 12, 16]
Whole kiwifruit	2 fruit	4 weeks	X			√	79	●	●	●	[13]
Whole kiwifruit	2-3 fruit	6 weeks	X	√			48	●	●	●	[14]
Whole kiwifruit	2-3 fruit	3 weeks	X	√			38	●	●	●	[14]
Whole kiwifruit	4 fruit	3 days	√	√			14	●	●	⊘	[15]

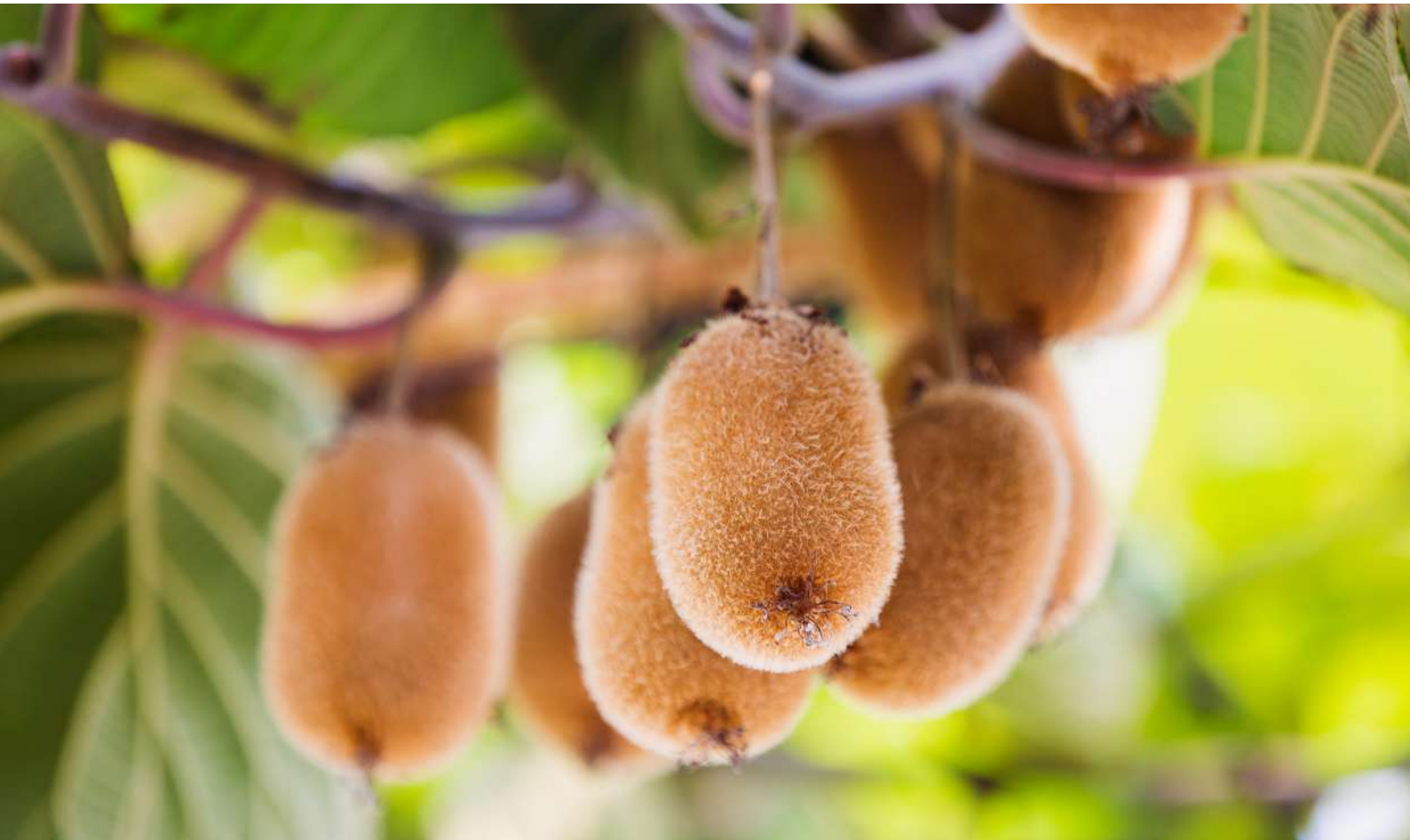
● = significant improvement
● = non-significant improvement
⊘ = no change, positive result
⊘ = no change
RCT = randomised controlled trial

SCIENCE PERFECTED IN MARKET™

Actazin® at a low dose of 600 mg significantly increases the number of bowel movements per week in constipated individuals with superior effects compared to other kiwifruit powders at higher doses.

A 600 mg dose of Actazin provides the same benefits to bowel regularity as 2 or more whole green kiwifruit.





Clinical studies details

Product	Dose and Intervention period	Study design, population	Clinical Endpoint Key Results			Ref
			Stool Form (Bristol Stool Scale (BSS))	BM number/ frequency	Symptoms / Ease / Comfort	
Actazin®	600mg or 2,400 mg/day; 4 weeks each, 2-week washout	Randomised, double-blind, placebo-controlled, crossover (RCT) Healthy (no constipation), n = 19	No significant changes - did not induce looser stools in already healthy people	2,400 mg Significant increase in weekly BM + 0.77 in whole group (p = 0.014 vs washout) + 1.47 in responders (p < 0.001 vs washout) 600 mg Near-significant increase in weekly BM for whole group +0.56 (p = 0.06 vs washout) Significant increase in weekly BM in responders +1.19 (p = 0.005 vs washout)	No significant changes*, already healthy	[1]
		Functionally constipated, n = 9 (*NB: not sufficiently powered due to recruitment issues)	No significant changes*	Non-significant increase with 600 mg in responders: weekly change = +1.82 (p = 0.087)	No significant changes*	
Actazin®	600 mg/day; 4 weeks each	Multi-centered, randomized, double-blind, placebo-controlled, parallel study (RCT) Healthy with constipation, n = 43	Significantly softer stools, BSS +0.38 (day 14, p < 0.05 vs placebo and baseline)	Significant increase in weekly CSBM +1.44 (at endpoint, p < 0.001 vs baseline)	Significant improvements in abdominal, rectal and stool symptoms and quality of life scores (p < 0.01 vs baseline)	[2]
Kiwifruit powder (water extract)	Freeze-dried water extract of green kiwifruit skin and flesh (Digesten), 1,000 mg /day; 3-weeks, 3-9 week washout	Randomised, double-blind, placebo-controlled, crossover (RCT) Healthy, constipated, n = 32	No significant changes in BSS	Significant increase in weekly BM +2.12 (p < 0.05 vs pre-trial frequency)	Significant improvement in gastrointestinal symptoms score	[3]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Zyactinase), 2,160 mg / day 1-week	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, constipated, n = 28	Significantly softer stools (no BSS numbers available)	Significant increase in weekly BM +2.6 (p < 0.01vs baseline and placebo)	Significant improvements in abdominal discomfort	[4]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Zyactinase), 2 capsules x 3/ day; No dose info reported. 4-weeks	Open-label, non-randomised, uncontrolled (Experimental study) Elderly, constipated, n = 41	Significantly softer stools (no BSS numbers available)	Significant increase in weekly BM +1.4 (day 21, p < 0.05 vs baseline)	Significant improvement in feeling of abdominal lightness	[5]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit with skins (Actiphen / Phenactiv), 3,000 mg / day; 6-weeks	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, gastrointestinal symptoms, n = 11	No significant changes in BSS	No significant changes in the number of bowel movements	Significant improvement in gastrointestinal symptoms score	[6]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Kivia/ Zyactinase), 5.5 g / day; 4-weeks	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, constipated, n = 39	Changes in stool form with increases in types 3,4 and 5 reported (no averages available)	Significant increase in weekly BM +2.24 (p =0.000 vs baseline)	Significant improvements in bloating and abdominal discomfort	[7]
Whole green kiwifruit	Low-flatulogenic diet plus 2 x whole fresh green kiwifruit / day; 2-weeks	Near-significant improvement in BSS + 0.5 (p = 0.072 vs no kiwifruit)	Significantly higher BM frequency compared to control group (+2.1 BM/ week, p = 0.001)	Significantly higher BM frequency compared to control group (+2.1 BM/ week, p = 0.001)	No significant difference in abdominal symptom scores or abdominal distension	[8]
Whole green kiwifruit	2 x whole fresh green kiwifruit / day; 4-weeks, 4-week washout Psyllium as positive control	Multi-centred, randomised, single-blind, crossover (RCT) Functionally constipated, n = 60 IBS-C, n = 61 Healthy, n = 63	Significantly softer stools, BSS +0.6 (FC + IBS-C, p < 0.0001 vs baseline)	Significant increase in weekly BM: +1.69 (IBS-C+FC, P < 0.0001) Significant increase +1.19 BM/week in healthy controls (p = 0.0022) +0.9/week for psyllium (IBS-C+FC groups, p = 0.0007)	Significant improvement in gastrointestinal symptoms scores; significant reduction in straining and abdominal pain	[9-12, 16]
Whole green kiwifruit	2 x whole fresh green kiwifruit / day; 4-weeks Compared to psyllium and prunes	Parallel, partially randomized, exploratory trial Functionally constipated and IBS-C, n = 79	Significantly softer stools, BSS +0.4 (p = 0.01 vs baseline) Prunes but not psyllium significantly improved BSS	Significant increase in weekly BM: +1.0 (p < 0.01 vs baseline) Prunes (+2.7) and psyllium (+1.7) significantly increased weekly BM	Significant improvement in straining (p < 0.01) and bloating (p = 0.02) Prunes and psyllium improved straining, but not bloating	[13]
Whole green kiwifruit	1 x whole fresh green kiwifruit per 30 kg body weight (2-3 fruit) / day; 6-weeks, no washout	Randomised, uncontrolled, crossover (preliminary study) Healthy elderly, n = 48	Significant improvement (14%) in consistency (p < 0.0001; NB: not BSS)	Near-significant increase in weekly BM +0.54 (p = 0.06 vs no kiwifruit)	Significant improvement in ease (p < 0.0001 vs no kiwifruit)	[14]
Whole green kiwifruit	1 x whole fresh green kiwifruit per 30 kg body weight (2-3 fruit) / day; 3-weeks, no washout	Randomised, uncontrolled, crossover (Experimental study) Healthy elderly, n= 38	Significant improvement (12%) in consistency (p < 0.0001; NB: not BSS)	Significant increase in weekly BM +0.91 (p = 0.012 vs no kiwifruit)	Significant improvement in ease (p < 0.0001 vs no kiwifruit)	[14]
Whole green kiwifruit	2 x whole fresh green kiwifruit twice daily; 3 days, 2-week washout	Randomised, crossover Healthy, n = 14	Significantly softer stools, BSS +0.6 (p = 0.011 vs control)	Significantly higher BM frequency, +0.32 BM/day vs control (p = 0.034)	No significant difference in adverse symptom scores	[15]

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