Table S1. ANOVA – $3^{(3-1)}$ factorial experimental design – Step a – Optimization pectinase activity

Factor	ANOVA; Var.: Pectinase activity (U/g dry CPH); R-sqr=,96252; Adj:,81259 (3**(3-1) fractional factorial design, 1 block , 9 runs ([No active dataset]) in Workbook_Step_1_3(3-1)) 3 3-level factors, 1 Blocks, 11 Runs; MS Residual=434,0556 DV: Pectinase activity (U/g dry CPH)				
	SS	df	MS	F	p
(1)CPH (g/L) L+Q	5816,49	2	2908,244	6,70016	0,129867
(2)Yeast extract (g/L) L+Q	9860,21	2	4930,107	11,35824	0,080918
(3)Pectin extract g/L L+Q	3498,85	2	1749,424	4,03041	0,198791
1*2	540,47	2	270,237	0,62259	0,616300
Error	868,11	2	434,056		
Total SS	23160,16	10			

Figure S1. Response surface - First step optimization – $3^{(3-1)}$ experimental design

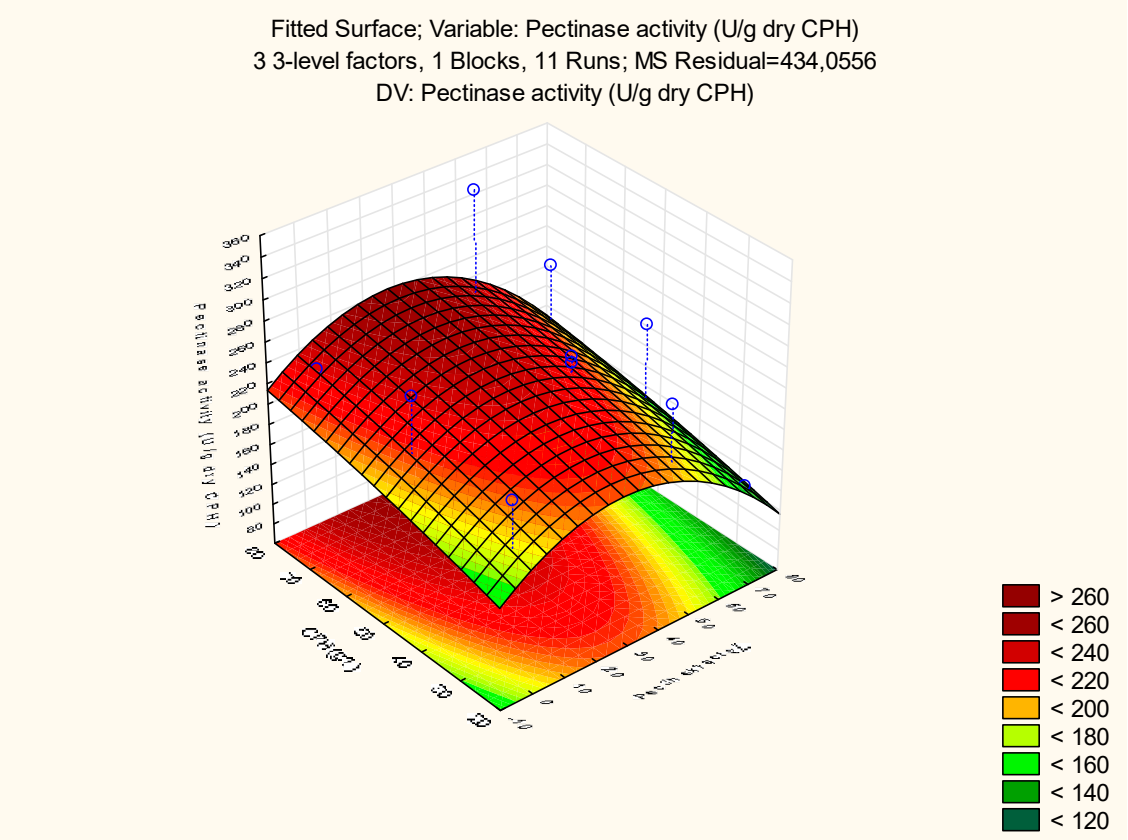


Table S2. ANOVA – CCDR – Step 2 – Optimization pectinase activity. ANOVA; Var.: Pectinase activity (U/g dry CPH); R-sqr = 0,85461; Adj: 0,70922 (2**(2) central composite, nc=4 ns=4 n0=2 Runs=10 ([No active dataset]) in Workbook_Step_2_CCRD) 2 factors, 1 Blocks, 11 Runs; MS Residual=3393,433 DV: Pectinase activity (U/g dry CPH)

Factor	SS	df	MS	F	p
(1) CPH (L)	26868,2	1	26868,2	7,917712	0,037379
CPH (Q)	24105,4	1	24105,4	7,103555	0,044602
(2) Pectin extract (L)	10864,0	1	10864,0	3,201463	0,133592
Pectin extract (Q)	6810,0	1	6810,0	2,006825	0,215771
(1) L by (2) L	20239,3	1	20239,3	5,964265	0,058496
Error	16967,2	5	3393,43		
Total SS	116700,0	10			

Figure S2. Pareto chart – First step optimization – $3^{(3-1)}$ experimental design

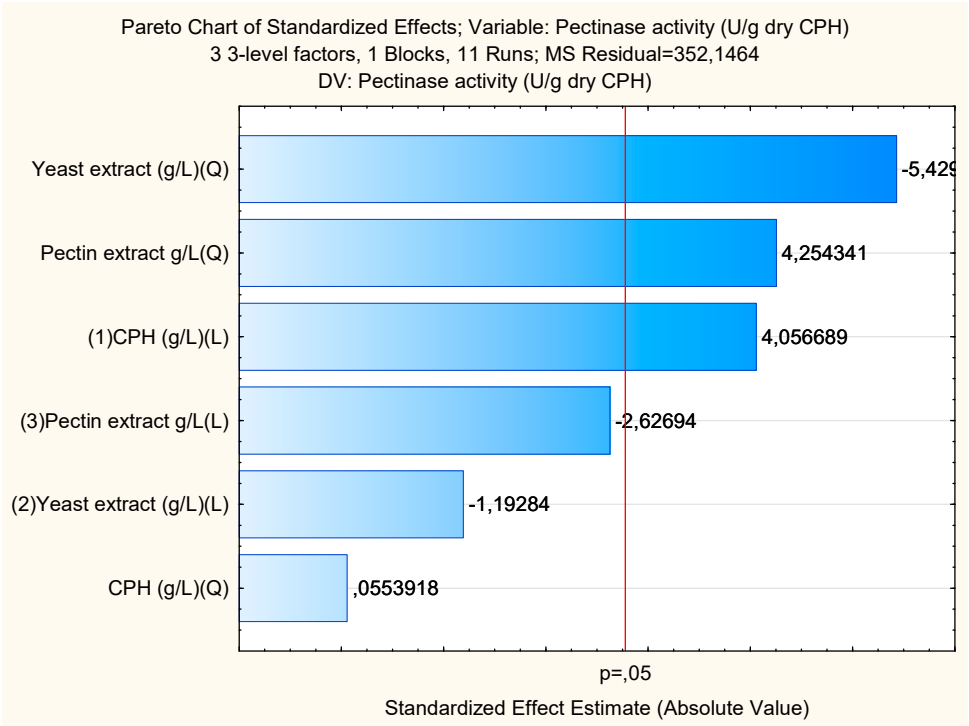


Figure S3. Predicted values versus observed values – Step 2 Optimization - CCDR

