

Table 1: Experimental Factors and Conditions for Antimicrobial Activity Optimization in *Streptomyces* Ca2-5 Cultures

	Number of the (flask test)	Nitrogen Sources (2gram)	Carbon Sources (2gram)	solution (100 ml)	rpm	Trace-Elements (10 mM)	incubation conditions	Incubate time (days)						
								Sub-group 1	Sub-group 2	Sub-group 3	Sub-group 4	Sub-group 5	Sub-group 6	Sub-group 7
Flask group A	1	Soybean	Mannitol		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	2	Soybean	Mannitol		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	3	Soybean	Mannitol		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	4	Soybean	Mannitol		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	5	Soybean	Mannitol		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	6	Soybean	Mannitol		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	7	Soybean	Mannitol		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	8	Soybean	Mannitol		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	9	Soybean	Mannitol		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	10	Soybean	Starch		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	11	Soybean	Starch		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	12	Soybean	Starch		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	13	Soybean	Starch		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	14	Soybean	Starch		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	15	Soybean	Starch		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	16	Soybean	Starch		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	17	Soybean	Glucose		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	18	Soybean	Glucose		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	19	Soybean	Glucose		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	20	Soybean	Glucose		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	21	Soybean	Glucose		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	22	Soybean	Glucose		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	23	Soybean	Glucose		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	24	Soybean	Glucose		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	25	Soybean	Chitin		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	26	Soybean	Chitin		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	27	Soybean	Chitin		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	28	Soybean	Chitin		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	29	Soybean	Chitin		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	30	Soybean	Chitin		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	31	Soybean	Chitin		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	32	Soybean	Chitin		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Flask group B	33	Papriose	Mannitol		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	34	Papriose	Mannitol		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	35	Papriose	Mannitol		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	36	Papriose	Mannitol		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	37	Papriose	Mannitol		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	38	Papriose	Mannitol		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	39	Papriose	Mannitol		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	40	Papriose	Mannitol		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	41	Papriose	Starch		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	42	Papriose	Starch		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	43	Papriose	Starch		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	44	Papriose	Starch		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	45	Papriose	Starch		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	46	Papriose	Starch		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	47	Papriose	Starch		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	48	Papriose	Starch		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	49	Papriose	Glucose		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	50	Papriose	Glucose		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	51	Papriose	Glucose		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	52	Papriose	Glucose		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	53	Papriose	Glucose		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	54	Papriose	Glucose		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	55	Papriose	Glucose		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	56	Papriose	Glucose		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	57	Papriose	Chitin		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	58	Papriose	Chitin		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	59	Papriose	Chitin		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	60	Papriose	Chitin		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	61	Papriose	Chitin		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	62	Papriose	Chitin		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	63	Papriose	Chitin		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	64	Papriose	Chitin		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Flask group C	65	Yeast Extract	Mannitol		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	66	Yeast Extract	Mannitol		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	67	Yeast Extract	Mannitol		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	68	Yeast Extract	Mannitol		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	69	Yeast Extract	Mannitol		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	70	Yeast Extract	Mannitol		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	71	Yeast Extract	Mannitol		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	72	Yeast Extract	Mannitol		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	73	Yeast Extract	Starch		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	74	Yeast Extract	Starch		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	75	Yeast Extract	Starch		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	76	Yeast Extract	Starch		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	77	Yeast Extract	Starch		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	78	Yeast Extract	Starch		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	79	Yeast Extract	Starch		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	80	Yeast Extract	Starch		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	81	Yeast Extract	Glucose		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	82	Yeast Extract	Glucose		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	83	Yeast Extract	Glucose		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	84	Yeast Extract	Glucose		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	85	Yeast Extract	Glucose		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	86	Yeast Extract	Glucose		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	87	Yeast Extract	Glucose		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	88	Yeast Extract	Glucose		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	89	Yeast Extract	Chitin		0	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	90	Yeast Extract	Chitin		100	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	91	Yeast Extract	Chitin		150	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	92	Yeast Extract	Chitin		200	CaCl ₂	Light	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	93	Yeast Extract	Chitin		0	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	94	Yeast Extract	Chitin		100	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	95	Yeast Extract	Chitin		150	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days
	96	Yeast Extract	Chitin		200	CaCl ₂	dark	1 day	2 days	3 days	4 days	5 days	6 days	7 days