

TABLE I

Effect of O-R potential on the growth of *E. histolytica* strain 200 : NIH in TP-S-1-medium containing cysteine without ascorbic acid. An inoculum of 5,000 amoebae/ml of the medium was used

Seitz filtered cysteine in TP-S-1-medium %	O-R potential mv	No. of amoebae/ml of the medium after days*									
		1	2	3	4	5	6	7	8	9	
0.3	-300	10,000	29,000	70,000	110,000	200,000	260,000	320,000	..	..	
0.2	-290	10,000	20,000	65,000	100,000	..	210,000	300,000	..	..	
0.1	-250	9,000	20,000	50,000	70,000	100,000	150,000	200,000	..	..	
0.05	-200	8,000	17,000	34,000	50,000	70,000	100,000	150,000	..	..	
0.025	-135	5,500	9,900	16,000	20,000	30,000	50,000	60,000	..	..	
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Autoclaved cysteine in TP-S-1-medium %											
0.3	-183	8,000	18,000	50,000	..	..	180,000	260,000	250,000	20,000	
0.2	-170	8,000	16,000	40,000	..	..	160,000	260,000	240,000	16,000	
0.1	-153	7,000	14,000	28,000	..	..	100,000	150,000	150,000	10,000	
0.05	-136	6,400	12,000	16,000	..	..	60,000	90,000	70,000	5,000	
0.025	-120	4,200	9,000	14,000	..	..	26,000	10,000	5,000	Nil	

\* Mean count from duplicate tubes.

Diamond<sup>11</sup> in 1961 used autoclaved 0.1% cysteine and 0.02% ascorbic acid in a diphasic axenic culture medium to grow *E. histolytica* (strain 200 : NIH). It has been shown by Singh, Das and Dutta<sup>9</sup> that it is dangerous to use cysteine + ascorbic acid in axenic TP-S-1-medium because this combination leads to a shift of O-R potential towards positive side which is lethal to amoebae when the medium is stored for 10 days or more. Moreover, the negative O-R potential produced by the above autoclaved combination of cysteine + ascorbic acid is not sufficiently low for the rapid growth of amoebae. It has been clearly shown in the present investigation that strongly negative O-R potential is necessary to cut down the lag phase of amoebae inoculated into axenic medium and to obtain the maximum population as has been observed in the case of *E. histolytica* growing with bacterial associates<sup>2, 4</sup>.

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