sult of the acquisition amount of cell isolation ification processes are presented in table 1 and 2.

TABLE 1
THE NUMBER OF CELLS

	E0	E1	E2	E3
	1,56.10 ^{6} e	5,89.10 ^{6} d	7,41.10 ^{6} b	1,34.10 ^{7} a
	8,42.10 ^{5} e	1,34.10 ^{7} a	1,25.10 ^{7} a	1,49.10 ^{7} a
	5,48.10 ^{5} e	5,04.10 ^{6} cd	5.41. 10 ^{6} cd	7.92. 10 ^{6} bc

TABLE 2
CELLS VIABILITY

	E0	E1	E2	E3
	96.3 a	98.91 a	97.58 a	95.65 b
	100 a	100 a	99.31 a	99.61 a
	100 a	100 a	100 a	95.53 a

nd of tissue or organ in nearly all living plants Usually the most commonly used is the leaf hung, 1988). This is because the cells produced form in size. The leaves are young and actively callus give better results. One important factor equisition of explant cells are the source tanman gic conditions, which include explant age, time tion and use of organs or tissue (Wetter and l, 1994). The release of cells from the tissue is pending on the type and concentration of Pektinase to digest the middle lamella, whereas and hemiselulase to digest the cell wall blocks 5]. Pektinase enzyme that is often used d Macerozyme pectyolase R -10 [6]. to isolate leaf protoplasts of peach *(Prunus persica)* by zyme Onozuka R-10 (2%) combined with (0.5%) with cell viability reached 90% for s and 60% for the cell. Dixon (1987) using m *(Rhizophus polygalacturonase)* to isolate the af mesophyll cells and the concentration used / L with incubation time for 20 minutes. The cells from other cells varies for each plant Some species are tolerant of the long time but there protoplasnya cells damaged by incubation [7]. Enzyme activity is highly on pH. Generally, the optimal pH of enzyme 5.4 to 6.2. In an experiment conducted by 87) used pH is 6.0 in the medium maceration [8]. , optimal pH for the enzyme cellulase 5-6 ozym Onozuka is 4-5. During the isolation of common pH changes that could affect the activity. In order to maintain the pH during the process progresses, the enzyme solution adde buffer compounds such as $MgSO_4$ (Gambor 1981), MES (N-Morpholino Ethane sulphon (Dixon, 1987). The method of incubation there kinds of methods using non-agitation and Agitation method using penggojog *(shaker)* certain speed. [3]. using a magnetic stirrer with that is not too fast. There is also a method shaking in which the explants were incubated in for a certain time [9]. Giving osmoticum maintain osmotic pressure cell. Osmotic commonly used are sorbitol, glucose [10]. In organic salts used as an osmoticum such as $CaCl_2.2H_2O$.

3. Cell Growth

1. Cell Growth Medium

After the cells were isolated, then the number and then cultured in growth medium. The first cell cultivation conducted in Petri dishes (Fig.2)

Fig. 2. Mesophyll cell culture *C.asiatica* suspens day after seeding in Petri dishes with MS medium.

This is done because the acquisition of cells fr cell isolation process is only sufficient for the volu approximately 25 ml of culture in the medium. S when placed in Erlenmeyer not meet the initial a of planting that is 10^{5} / ml. However, at this sta be observed the growth of the cells by obs populations in a haemocytometer. From the obtained by the observation that, two days after pl of cells, almost all cells still looked viable, the groups or individually. Besides, the density of ce the haemocytometer is increasingly crowded.. En the fourth day there appeared to start cell groups