The pure starch extracted from vegetables presents a wide spectrum of application. Green bananas cv. Nanicão Jangada was submitted to different binomials time and temperature to facilitate peeling. The procedure needs to be properly sized to facilitate removal of the shell and to avoid gelatinization. Was used the Response Surface Methodology with two independent variables, time and temperature of heating medium, resulting in the following combinations to be evaluated: 72°C/4 min; 72°C/16 min; 92°C/4 min; 92°C/16 min; 82°C/18 min; 82°C/1.5 min; 68°C/10 min; 96°C/10 min; 82°C/10 min. The combination of 82°C/18 minutes in hot water is most promising. In the retort the combinations to be evaluated were: 110°C/20 s; 110°C/60 s; 130°C/20 s; 130°C/60 s; 120°C/1.18 s; 120°C/68.2 s; 106°C/40 s; 134°C/40 s; 120°C/40 s. The combination of 120°C/40 seconds was the most satisfactory. In the next step for the extraction of starch, the use of citric acid (0.5 g/L) resulted in the extration of starch with better quality compared to the use of sodium hydroxide solution (0.2% w/w) combined with sodium metabisulfite (200 ppm). The pulp accounted for 52.11±1.77% of fruit weight (wb) had a moisture content of 72.36±0.06% (db). The pulp of the banana represents 14.40±0.49% (db) of fresh fruit weight and extraction was obtained 12.79±0.59% (db) starch.