Introduction. Anthocyanins are hydrophilic compounds that have different therapeutic activities (Wong, et al. 2010) due to their antioxidant capability (Pietta, 2007) these biocompounds have different colors from blue to red so as to be important for pharmaceutical and food industry. Just recently in food industry natural colorants are use; then anthocyanins are widely use. In blueberries, twenty deriving anthocyanins have been isolated (Rui Li., et. al. 2011).

The objective of this study was to assess the optimal time conditions for extracting liquid-solid and purifying the blueberry anthocyanins.

Methods.

Results. According to the set methodology the data obtained in the first stage that corresponds to grinding pounder of blueberries with liquid dissolution during in a period of time from 1-13 minutes it was establish that the fraction of dry weigh for each time due not change considerably. This was confirmed by the spectrophotometric measure of anthocyanins with wave length of 700 nm and 520 nm with 4.5 and 1 pH respectively; the results are affected by the temperature generated during the grinding time. In the second stage using the size reduction of the particle by grinding and shaking, the FSS was determined by two techniques: for direct separation and freezing both favor that the polymers, forming colloids, get in contact with water and they get insoluble and unfreezing and centrifugation a larger portion of solids are extract, with this process the anthocyanins concentration is not affected; assessing the FSS results obtained in the first stage in the 13th minute, which is 0.061, it is expected that the shaking results cannot be smaller, this indicates experimental error. In the microfiltration operation and particularly in the ultrafiltration (figure 2) it is shown the amount of permeated flux and the permeated accumulate volume in comparison to the one obtained in microfiltration process, it was just observed the first 2 zones, this was expected because of the less sample quantity “From 0 to 0.2 ml/minute”: indeed, the quantity of solids are less.

Conclusions. The appropriate grinding time is 15 second. It is concluded that the shaking time after a 15 second grinding should not be longer that 30 minutes. Carry out immediately the anthocyanins determination during the liquid-solid extraction because they get unstable.

References