The Murcott ‘Ortanique’ is a hybrid citrus fruit from the natural crossing of the orange with mandarin, which was discovered in Jamaica. It has medium to large size, weighing 180 g, and rounded shape. They stood out among the citrus fruits to present a strong aroma and rich, seedless, extremely sweet flavor well balanced with acidity. It has a lot of juice, this quality favorable to the technological development of new food products. In view of this the aim of this study was to characterize physical and physico-chemical the fruit and pulp of Murcott ‘Ortanique’ (*Citrus sinensis* (L) Osbeck x *C. reticulate* Blanco), from Ceará State, as the weight, length, width, thickness, pulp yield, pH, titratable acidity, ascorbic acid, soluble solids, moisture, ash, water activity, reducing sugars, total sugars, non reducing sugars and color. The Murcott ‘Ortanique’ pulp had a yield of 34.48%, mass of 245.41 g, 7.98 cm in length, width 7.05 cm, 8.04 cm thick, water activity of 0.980, pH of 3.28, soluble solids of 8.40 °Brix, titratable acidity of 0.92% citric acid, 8.96 mg/100 g of ascorbic acid, reducing sugar of 3.00% glucose, total sugar 6.00% glucose and non-reducing sugars of 2.85% sucrose, and with yellow color. The pulp of Murcott ‘Ortanique’ presented suitable for fresh consumption and as raw material for manufacture of food products, and very acid (pH < 4.0).