Mangoes (Mangifera indica cv. Nam Dokmai) are tropical perishable fruit that susceptible to chilling temperature. The fruit were harvested at mature green, and then stored at 8°C or 20°C. Chilling injury symptom were not found both mangoes stored at two temperatures. The fruit stored at 8°C showed slightly change in the quality; firmness, color change of peel and pulp, soluble solids, titratable acidity and respiration rate while those were stored at 20°C developed to ripen. Color change of peel and pulp followed by increasing of yellow index and a value within 10 days. The weight loss of mangoes stored at 8°C was lower than stored at 20°C. There were no significant changes in reducing sugar, total nonstructural carbohydrates and ethylene production between two groups of them. Physiological and chemical change of Nam Dokmai has great appear on the forth day of storage, except the fruits stored at 8°C. From this study, Nam Dokmai presented ethylene peak on the fifth day, before climacteric peak presented on the day after seventh day of storage.