

CHAPTER V

CONCLUSION

1. Naringin was not found in Thai tangerine juice, thus the major bitter compound is limonin.
2. The sensitivity of the method for limonin determination was 0.3 ppm. The recovery and precision of the determination was 66-68 % and ± 0.94 to ± 3.70 respectively depending on the application load.
3. Higher load provides better recovery.
4. The limonin in pasteurized juice was the highest and significantly different from fresh and chilled juice at the confidence level of 0.05.
5. The optimum condition for batch debittering process was 3 g% β -CD polymer at room temperature for 30 minutes, which gave 68 % limonin reduction. The absorption capacity for limonin was 0.17 mg limonin/g β -CD polymer.
6. The efficiency of the column process under similar batch condition was 94 % limonin reduction and the absorption capacity was 0.27 mg limonin/g β -CD polymer. The productivity was 21 ml/column/hour. Estimation cost for this condition was around 1,200 bahts/column.
7. The XAD-16 column gave ~ 100% limonin reduction with 5.6 g% at the same chromatographic condition. The adsorption capacity was 0.18 mg limonin/g XAD-16 resin.
8. Both β -CD polymer and XAD-16 were good candidates for limonin reduction.