

ABSTRAK

PT Sucofindo sebagai perusahaan yang memiliki jasa analisis laboratorium hanya memiliki satu unit alat *Liquid Chromatography Mass Spectrometry (LC-MS/MS)* sehingga mengakibatkan keterlambatan penyelesaian order di atas 1% dan potensi *lost sales* apabila instrumen tersebut rusak dan tidak bisa digunakan. Oleh karena itu perusahaan berencana melakukan investasi instrumen tersebut sehingga diperlukan analisis kelayakan investasi berdasarkan aspek finansial dan non finansial. Dari proses analisis non finansial dengan menggunakan *pareto diagram*, *fishbone diagram* dan *tool 5W + 1H* didapatkan bahwa pengadaan instrumen LC-MS/MS baru menjadi solusi dari dua akar masalah utama keterlambatan penyelesaian order yaitu ketika instrumen rusak dan untuk mengurangi *changeover* yang tinggi. Sementara dari aspek finansial didapatkan hasil nilai NPV sebesar Rp4.405.905.569, IRR sebesar 39,61%, PP selama 2 tahun 2 bulan, BCR sebesar 1,7331. Berdasarkan hasil studi kelayakan yang dilakukan terhadap investasi *Liquid Chromatography Mass Spectrometry (LC-MS/MS)*, maka investasi dinyatakan layak untuk dilaksanakan karena nilai NPV > 0, IRR > suku bunga yang dipakai (15%) dengan jangka waktu pengembalian modal (PP) lebih cepat dari umur investasi (6 tahun) dan BCR > 1.

Kata Kunci: Investasi, Studi Kelayakan, LC-MS/MS, Kromatografi, Kriteria Penilaian Investasi



ABSTRACT

PT Sucofindo as a company that provides laboratory analysis services only have one unit Liquid Chromatography Mass Spectrometry (LC-MS/MS), affecting delays in completion order of more than 1% and potential lost sales if the equipment is damaged and cannot be used. The company is planning to invest LC-MS/MS, therefore, investment feasibility analysis is needed based on financial and non-financial aspects. From the non-financial analysis process using Pareto diagrams, fishbone diagrams and 5W + 1H tool, it was found that the procurement of new LC-MS/MS is a solution to the two main root causes of delays in order completion, namely when the equipment is damaged and to reduce high changeovers. Meanwhile, from the financial aspect, the results obtained are NPV values of Rp.4,405,905,569, IRR of 39.61%, PP for 2 years and 2 months, BCR of 1.7331. Based on the results of a feasibility study conducted on Liquid Chromatography Mass Spectrometry (LC-MS/MS) investment, the investment is declared feasible because the NPV value > 0, IRR > the interest rate used (15%) with a payback period (PP) faster than the investment age (6 years) and BCR > 1.

Keywords: *Investment, Feasibility Analysis, LC-MS/MS, Chromatography, Investment Valuation Criteria*

