

INTISARI

Kegiatan pelaksanaan karya tugas akhir ini bertujuan mengetahui pengaruh perubahan formulasi penggunaan garam, asam formiat, asam sulfat, preventol CR dalam proses *pickling* terhadap penurunan potensi kemunculan defek noda coklat pada kulit *pickle* serta mengetahui perbandingan ekonomis formulasi sebelum perbaikan dan formulasi setelah perbaikan. Faktor yang berpengaruh terhadap timbulnya defek noda coklat (*acid burn*) diduga akibat penggunaan asam sulfat dalam jumlah besar yaitu 2,2% pada proses *pickling*. Bahan baku yang digunakan pada proses *pickling* adalah kulit kambing awet garaman sebanyak 3.536 lembar kulit. Bahan kimia yang digunakan pada proses *pickling* adalah air, garam (NaCl), asam sulfat (H_2SO_4), Asam Formiat (HCOOH) dan anti jamur (Preventol CR). Metode yang digunakan yakni metode observasi, *interview*, praktek kerja lapangan, studi literatur dan perhitungan ekonomi. Alternatif reformulasi yang dibuat terbagi menjadi 2 yakni proses *pickling* untuk persiapan proses *tanning* krom, dan penyimpanan jangka lama. Berdasarkan kajian literatur noda coklat (*acid burn*) dapat timbul dikarenakan penggunaan asam sulfat yang berlebih sehingga menimbulkan reaksi eksoterm. Reformulasi proses *pickling* dilakukan dengan penambahan asam formiat sebanyak 0,1% serta pengurangan asam sulfat menjadi 1% untuk persiapan *tanning* krom dan 1,5% untuk penyimpanan diharapkan akan mengurangi noda coklat (*acid burn*). Hasil studi tidak dilakukan pengujian sehingga perlu adanya penerapan formulasi perbaikan atau trial skala lab atau produksi untuk mengetahui prosentase penurunan defek noda coklat (*acid burn*). Pengurangan penggunaan asam sulfat pada proses *pickling* juga dapat menghemat biaya penggunaan bahan kimia sebesar Rp 103.428,- untuk persiapan *tanning* krom dan Rp 48.730,- untuk penyimpanan.

Kata Kunci : reformulasi *pickle*, asam sulfat, defek *acid burn*, aspek ekonomis

ABSTRACT

This final project implementation activity aims to know the effect of changes in the formulation of using salt, formic acid, sulfuric acid, preventol CR in the pickling process on reducing the potential appearance of brown stain defects on pickled skin and knowing the economic comparison of formulations before repair and formulations after repair. Factors that influence the emergence of brown stain defects (acid burn) are thought to be due to the use of large amounts of sulfuric acid, namely 2.2% in the pickling process. The raw material used in the pickling process is 3.536 pieces of salted goat skin. The chemicals used in the pickling process are water, salt (NaCl), sulfuric acid (H₂SO₄), formic acid (HCOOH) and anti-fungal (Preventol CR). The method used is the method of observation, interviews, field work practice, literature study and economic calculations. The reformulation alternatives are divided into 2, namely the pickling process for the preparation of the chrome tanning process and long-term storage. Based on the literature review, brown stains (acid burn) can occur due to the use of excess sulfuric acid, causing exothermic reactions. Reformulation of the pickling process was carried out by adding 0.1% formic acid and reducing sulfuric acid to 1% for the preparation of chromium tanning and 1.5% for storage, which is expected to reduce acid burn. The results of the study were not tested, so it is necessary to apply a repair formulation or trial on a lab or production scale to determine the percentage reduction in brown stain defects (acid burn). Reducing the use of sulfuric acid in the pickling process can also save the cost of using chemicals of IDR 103,428 for the preparation of chrome tanning and IDR 48,730 for storage. The results of the study were not tested, so it is necessary to apply a repair formulation or trial on a lab or production scale to determine the percentage reduction in brown stain defects (acid burn). Reducing the use of sulfuric acid in the pickling process can also save the cost of using chemicals of IDR 103,428 for the preparation of chrome tanning and IDR 48,730 for storage. The results of the study were not tested, so it is necessary to apply a repair formulation or trial on a lab or production scale to determine the percentage reduction in brown stain defects (acid burn). Reducing the use of sulfuric acid in the pickling process can also save the cost of using chemicals of IDR 103,428 for the preparation of chrome tanning and IDR 48,730 for storage.

Keywords : pickle reformulation, sulfuric acid, acid burn defect, economical aspects