

IDENTIFIKASI SPESIES *Staphylococcus* sp. DARI SUSU SAPI PERANAKAN *Friesian holstein* (PFH) DI UNIT PENDIDIKAN DAN PELATIHAN KESEHATAN HEWAN (UP2KH) DAN FAKULTAS PETERNAKAN (FAPET)

INTISARI

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Susu merupakan sumber protein hewani yang dibutuhkan dalam pertumbuhan, perkembangan dan kesehatan tubuh. Kendala utama dalam produksi susu adalah radang ambing (mastitis). Bakteri utama yang sering ditemukan dalam susu antara lain *Staphylococcus* sp. *Staphylococcus* yang berhasil diisolasi dari susu adalah *Staphylococcus aureus*, *Staphylococcus intermedius*, *Staphylococcus hyicus* dan *Staphylococcus* koagulase negatif. Penelitian ini bertujuan untuk mengetahui persentase mastitis dan mengidentifikasi *Staphylococcus* dari susu sapi normal, mastitis klinis dan subklinis di UP2KH dan FAPET.

Sebanyak 37 sampel yang terdiri atas 16 sampel dari empat ekor sapi di UP2KH dan 21 sampel dari enam ekor sapi di FAPET. Sampel susu dilakukan skrining mastitis subklinis dengan menggunakan reagen *California Mastitis Test* (CMT). Sampel susu kemudian dibawa ke laboratorium dan disentrifuse dengan kecepatan 5000 rpm selama lima menit, selanjutnya ditanam ke media plat agar darah dengan inkubasi pada suhu 37°C selama 24 jam. Koloni yang diduga *Staphylococcus* sp. memiliki ciri-ciri bulat, berwarna putih sampai kuning, halus dan konvek. Koloni dugaan dikonfirmasi dengan pengecatan Gram kemudian dilanjutkan dengan uji biokimia yang meliputi uji katalase, uji *Mannitol Salt Agar* (MSA), uji koagulase, uji *Voges-Proskauer* (VP) dan uji gula-gula.

Hasil uji penapisan mastitis menunjukkan 16 sampel susu dari UP2KH (100%) mastitis subklinis, 18 sampel susu dari FAPET (85%) normal, dua sampel FAPET (10%) mastitis subklinis serta satu sampel dari FAPET (5%) mastitis klinis. Isolasi dan identifikasi sampel susu ditemukan tujuh isolat *Staphylococcus* sp. dari UP2KH dan satu isolat *Staphylococcus* sp. dari FAPET. Isolat tersebut adalah *Staphylococcus aureus* koagulase positif (14%), *Staphylococcus aureus* koagulase negatif (14%), *Staphylococcus epidermidis* (43%) dan *Staphylococcus chromogenes* (29%) yang berasal dari UP2KH sedangkan yang berasal dari FAPET diperoleh satu spesies *Staphylococcus chromogenes* (100%). Kesimpulan dari penelitian ini ditemukan empat spesies *Staphylococcus* di UP2KH yaitu, *Staphylococcus aureus* koagulase positif, *Staphylococcus aureus* koagulase negatif, *Staphylococcus epidermidis* dan *Staphylococcus chromogenes* sedangkan sampel dari FAPET hanya ditemukan satu spesies yaitu *Staphylococcus chromogenes*.

Kata kunci: Susu sapi, mastitis, *Staphylococcus* sp.

IDENTIFICATION SPECIES of *Staphylococcus* sp. FROM PERANAKAN Friesian holstein (PFH) AT EDUCATION AND ANIMAL HEALTH TRAINING UNIT (UP2KH) AND ANIMAL SCIENCE FACULTY (FAPET)

ABSTRACT

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Milk is source of animal protein which is needed for growth and body health. The main stumbling block on milk production is udder inflammation (mastitis). The main bacterial that frequently be found in mastitis milk are *Staphylococcus* sp., *Streptococcus* sp. and *Escherichia coli*. *Staphylococcus* that have been isolated from milk are *Staphylococcus aureus*, *Staphylococcus intermedius*, *Staphylococcus hyicus* and *Staphylococcus* negative coagulation. The aim of this research was to understand percentage of mastitis and identification *Staphylococcus* from normal cow, mastitis clinis and subclinis at education and animal health unit (UP2KH) and animal science faculty (FAPET).

Thirthy-seven samples that was containing 16 samples from four cows of UP2KH and 21 samples from six cows of FAPET. Milk samples are tasted by subclinical mastitis screening with California Mastitis Test (CMT) reagen. Milk samples then were taken to the laboratory and were sentrifuged at 5000 rpm for five minutes, therefore were planted to blood agar plate medium and were incubated at 37°C for 24 hours. The colony which was suspected as *Staphylococcus* sp. has the characteristics of round, white to yellow in colour, soft and convex. The suspected colony were confirmed with Gram staining and were continued with biochemistry tests which including catalase test, Mannitol Salt Agar (MSA) test, coagulase test, VP test and sugar tests.

The result of mastitis screening showed that 16 samples of milk from UP2KH (100%) subclinical mastitis, 18 samples of milk from FAPET (85%) are normal, two samples from FAPET (10%) are subclinical mastitis and one samples from FAPET (5%) is clinical mastitis. Isolation and identification of milk samples were found seven isolates *Staphylococcus* sp. from UP2KH and one isolates *Staphylococcus* sp. from FAPET. Those isolates are coagulation positive *Staphylococcus aureus* (14%), coagulation negative *Staphylococcus aureus* (14%), *Staphylococcus epidermidis* (43%) and *Staphylococcus chromogenes* (29%) from UP2KH where as the isolates from FAPET were found one species of *Staphylococcus chromogenes* (100%). Conclusion in this research were found four species of *Staphylococcus* at UP2KH, they are coagulation positive *Staphylococcus aureus*, coagulation negative *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Staphylococcus chromogenes* while samples from FAPET are only can be found one species that is *Staphylococcus chromogenes*.

Keyword: cow's milk, mastitis, *Staphylococcus* sp.