



# Sex identification based on AMEL gene PCR amplification from blue sheep (*Pseudois nayaur*) fecal DNA samples

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**ABSTRACT.** The use of noninvasive genetic sampling to identify the sex of wild animals is an extremely valuable and important tool in molecular ecology and wildlife conservation. Sex determination using the amelogenin gene has been conducted in many species because only a single pair of primers is required to amplify both X- and Y-linked alleles. However, this method has not been used in field research with the feces of wildlife. In this study, we applied this method to 222 fecal samples from wild blue sheep (*Pseudois nayaur*) using amelogenin primers (SE47/SE48) after testing the effectiveness of sex determination using tissue samples and fecal samples from blue sheep of known sex. We found this method to be highly reliable (80.2%) for blue sheep. Amelogenin can be used to identify the sex of wild animals using fecal samples.

**Key words:** Amelogenin; Fecal sample; Non-invasive genetic sample; Blue sheep; Polymerase chain reaction-based sex-typing