



Methodology

A rapid protocol for purification of total RNA for tissues collected from pigs at a slaughterhouse

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ABSTRACT. Since RNA extraction is a crucial step in many molecular techniques, the protocols for sample collection and RNA purification need to be adapted to optimize their performance when samples are collected from animals at commercial facilities. Here we provide an RNA purification protocol for animal tissues collected from slaughterhouses. This protocol, modified from other techniques, uses TRIzol Reagent. Sample collection was performed wearing sterile gloves and facemasks, using sterile surgical instruments, and no longer than 8 min spent for each sample. A 0.9% sterile sodium chloride solution was used to wash the tissue before each sample collection. The whole process of RNA extraction was performed under cold environment and sterile conditions. This protocol produced good RNA yields (50 µg RNA per 100 mg tissue), good integrity and purity ($Abs_{260/280}$ from 1.8 to 2.0), from tissues such as liver, muscle, hypophysis, adipose tissue, and intestinal mucosa, in less than 2 h.

Key words: RNA purification; Pigs; Slaughterhouse