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## **Analyzing some chemical components present in by-products of citrus as rumen feeds**

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Citrus world wide production is over 88000000 ton and its wastes are estimated more than 15000000 ton (nearly half of it) citrus residues are composed principally of water, soluble sugars, fiber, organic acids, proteins and minerals. All of which are found in different amounts depending on fruit fraction. The chemical components of fiber together with other compounds such as protein and acidity of 2 types of lemons and 2 types of oranges, harvested in DEZPHOL province of Iran were determined. The parameters such as repeatability were evaluated to optimize this method. The cellulose, hemi cellulose, lignin in waste products of lemon were  $11/00 \pm 0/09$ ,  $36/25 \pm 2/9$ ,  $22/5 \pm 1/9$  and  $6.59 \pm 0.05$ ,  $1/75 \pm 13$ ,  $1/9 \pm 20/75$  in orange, respectively. The analyzed crude protein in waste products of lemon and orange by considering residue particles ( pulp, peel ) were 109-85 , 90-72 respectively (kg per dry matter ). The high amount of protein and fiber of citrus waste products make them a good source of energy as ruminant feed, furthermore citrus by-products have fewer negative effects on rumen fermentation than starch rich food.

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