

DETECTION OF PORK IN SOME MEAT PRODUCTS

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Trials for diagnosis of meat species in meat products were carried out since long time. Ostertage (1934) recommended three methods for differentiation of animal proteins; the complement fixation test, anaphylactic test and precipitation reaction. Pike and Sulkin (1957); Mullor et al. (1958) and Poli et al. (1977) used an agar diffusion technique for detection of meat adulteration; while Herran and Melton (1961) used animal serum and meat extract of the same species for the same aim. Kaiser et al. (1980a) and Swart and Wilks (1982) used isoelectric focusing and agar-gel immunodiffusion methods for detection of meat species in different mixtures.

For detection of pork in meat products Cook and Sturgeon (1966), used gas chromatography; while Ozawa et al. (1969); used the Ouchterlony's gel diffusion method for differentiation between pork, beef, mutton, horse, rabbit and tuna meats. Mark et al. (1986) used a pork Rapid Identification method (PRIME) for detection of pork in any raw whole or ground formulated meat products.

In Egypt pork as cheap kind of meat can be introduced in some meat products for adulteration and falsification, although consumption of pork is forbidden in Islam.

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Therefore, this work was planned to detect presence of pork in prepared raw meat for kabab, kofta and raw butcher's, sausage produced and sold at some poor districts in Cairo.

MATERIALS AND METHODS

Fifty samples each from prepared raw meat for kabab, kofta and raw butcher's sausage were collected from a poor district in Cairo.

Anti-pork serum was prepared using muscles of native swine slaughtered at Bassatin-Cairo-abattoir by injection of 5 Balady rabbits, 6 months to 2 years old (1.5-2 kg body weight); according to the technique recommended by Sinell and Mentz (1969).

Antigens from the collected samples were examined against pork antisera using the agar-gel diffusion technique recommended by Ouchterlony (1958 and 1962).

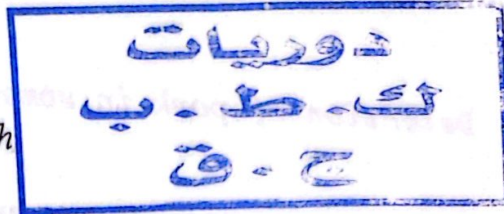
RESULTS AND DISCUSSION

The recorded results in Table (1) revealed the presence of pork in 2 out of 50 samples of prepared minced meat for kofta (4%) and 1 out of 50 samples of raw butcher's sausage (2%); while samples of prepared meat for production of kabab were free from pork.

Table (1): Incidence of pork in raw prepared meat for kabab, kofta and raw butcher's sausage.

Samples	Kabab			Kofta			Butcher's sausage		
	No. of Examined samples	No. of (+)ve samples	%	No. of examined samples	No. of (+)ve samples	%	No. of examined samples	No. of (+)ve samples	%
Incidence	50	-	-	50	2	4	50	1	2

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The obtained results are in agreement with those recorded by Ozawa et al. (1969), Fugate and Penn (1971) and Mark et al. (1986); who could detect pork in raw whole or ground formulated meat products; and disagree with the obtained results by Aideia (1988) who failed to detect pork in beef burger, minced beef and raw sausage.

Adulteration of meat products with pork is mainly economic due to the low price of pork. Moreover it constitutes a social problem in Egypt as pork and pork products are not lawful for Moslems.

In addition; pork specially if obtained from swines slaughtered out side abattoirs constitutes a serious health hazard to the consumers due to the possible infection with many parasitic and bacterial diseases specially *Trichinella spiralis*, *Cysticercus cellulosae*, Tuberculosis & Salmonellosis.

Therefor; the necessity of strict supervision and application of the concerning rules is to be ensured.

SUMMARY

Fifty samples each from prepared meat for kabab, Kofta and raw butcher's sausage were collected from some poor district in Cairo and examined for adulteration with pork using the agar-gel diffusion technique.

Pork was detected in 4% and 2% of meat prepared for kofta and raw butcher's sausage respectively; while samples from meat prepared for kabab were pork free.

Problems of adulteration and falsification as well as the probable hazards to the consumers call for the necessity of strict supervision and application of the present rules.

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