

Abstract

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Mango, apricot and peach kernels were analysed for their chemical composition,(mineral, amino acid composition, tannin and fatty acid composition). Mango, apricot and peach kernel had 12.0, 7.7 and 1.9% moisture, 4.1, 25.2 and 23.3% protein, 7.6, 41.7 and 50.6% lipid, 75.5, 16.1 and 19.1% carbohydrate, 10.3, 14.1 and 3.9% crude fiber, 2.5, 2.9 and 3.1 % ash and 0.3% tannins in mango kernel. Apricot and peach kernels contained 0.141 and 0.192% hydrocyanic acid, 2.40 and 3.25 % amygdalin, respectively, while, mango kernels are free from amygdalin. Mango kernel meal proteins had high glutamic acid, aspartic acid, arginine and leucine content and a low concentration of sulphur amino acids and lysine. Mango kernel fat contained high amounts of stearic (55.43%), linolic (16.09%) and oleic (14.91%), while palmitic, was present in small quantity. Concerning the mineral elements detected mango, apricot and peach kernels contained considerable amounts of K, Na, Ca, while, P was found in low level. In mango, peach and apricot kernels GLC analysis of unsaponifiable matter indicated that C₂₀ is the major hydrocarbon while cholesterol is present in a small amount.

Generally it could be concluded that the mango seed kernel is potentially a good source of nutrients which could be recommended for animal feed and possibly for human nutrition.

In a study to use mango seed kernel in sheep rations, the results showed that replacement of mango kernel meal (MKM) at 20% of maize in CFM didn't affect digestibility coefficient especially for dry matter (DM), organic matter (OM), crude protein (CP) and nitrogen free extract (NFE). Better N nutrition by sheep was obtained for both replacement level MKM (10 and 20%) without a reversible effect.

Key words: Mango kernels - Apricot kernels - Peach kernels – chemical composition - Fatty acids - amino acid analysis- digestibility- sheep- antioxidant – antibacterial -antifungal.

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LIST OF ABBREVIATIONS

B.V.	Biological value.
B.W	Body weight.
CF	Crude fiber.
CFM	Concentrate feed mixtures.
CP	Crude protein.
C.S	Chemical score.
DCP	Digestible crude protein.
DM	Dry matter.
E.A.A	Essential amino acid.
EE	Ether extract.
MKM	Mango kernel meal.
NA	Nitrogen absorbtion.
NB	Nitrogen balance
NDF	Neutral detergent fiber.
NFE	Nitrogen free extract.
NI	Nitrogen intake.
NR	Nitrogen retention
NRC	National Research Council.
OM	Organic matter.
P/E	Protein energy ratio.
PER	Protein efficiency ratio.
TBHQ	Tertiary butylhydroquinone.
TDN	Total digestible nutrients.