EFFECTS OF FRUIT-JUICE ON LIPID PEROXIDATION OF RED SOKOTO BUCKS SPERMATOZOA DURING LIQUID STORAGE

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The objective of this study was to determine the effect of fruit-rich antioxidants on lipid peroxidation (LPO) of buck spermatozoa during liquid storage. Pooled semen from five Red Sokoto bucks were diluted with Tris-egg yolk based extender supplemented each with pawpaw, tomato and water melon juices at 0, 2.5, 5, 7.5 and 10%. Following dilution, the semen samples were stored at 5°C for 96 hours. The level of malondialdehyde (MDA) in the stored semen was measured by determining the thiobarbituric acid reactive substances (TBARS) at 24, 48, 72 and 96 hours. Significant reduction of LPO was achieved by the addition of fruit-rich antioxidants to Tris-egg yolk based extender (P<0.05). The results showed reduction in LPO across the treatments comparable to control (P<0.05). The reduction in LPO was much pronounced at various levels of pawpaw juice, tomato juice, 2.5 and 5% watermelon juice during the first 24 hours of storage (P<0.05). Similar trend was observed in LPO after 48 hours of storage with much pronounced reduction at various levels of pawpaw and tomato juices (P<0.05). However, after 72 hours of storage, the lowest LPO was observed at various levels of pawpaw and 10% tomato juices. The level of LPO increased with increasing hours of storage and this increase followed similar trend across the levels of different juices in the extender and the control (P<0.05). The finding of this study reveals that fruit-rich antioxidants from pawpaw, tomato and water melon have protective ability to reduce LPO of buck spermatozoa during liquid storage.