values for each location and evaluation time. Therefore, these results suggest a proportion of the variation in meat quality can be attributed to both differences in day of slaughter and variability between genders.

Key Words: pork, quality, variability

21P Effect of freezing on the quality of Camel meat in comparison with beef. R. Shariatmadari* and M. Kadivar, *Isfahan University of Technology*, *Isfahan, Iran*.

In this study several physicochemical and functional properties of Iranian camel meat and the effects of freezing were investigated and compared with those of beef. Six Iranian Zaboli camels (3 camels aged approximately 3 years old and the others 5 years old) and six hybrid Holstein cows (aged similar to the camels) were randomly selected. Cows were stunned in the range of 150-180 mv before slaughtering. Intact samples from leg (each 5 Kg) were obtained within 45 min after slaughtering. Samples from 3 year old animals used to determine the physicochemical properties of meat, sub sampled at 5 h postmortem. Then the remaining lot of each sample stored at -20°C for a maximum period of 5 months and sub sampled at months 2 and 5 of storage. Physicochemical properties include pH, tenderness, water holding capacity (WHC), cooking loss, tyrosine value, extract release volume (ERV), TBA, and color. Samples from 5 years old animals sub sampled after 24h postmortem used to determine functional properties of meat. The remaining lot of each sample stored at -20°C and sub sampled after 2 and 5 months frozen storage. Functional properties include pH, WHC, emulsifying capacity (EC), emulsion stability (ES), foaming capacity (FC), foam stability after 10, 30 and 60 min (FS10, FS30, FS60), and buffering capacity (BC) over the pH ranges pHu-4.5 and pHu-7. Collected data were compiled in split plot design format and analyzed by analysis of variance (ANOVA) and Duncan multiple range tests using SAS statistical analysis software. All measurements were taken in duplicate. With regard to the physicochemical properties, fresh camel meat and beef (5h postmortem) were similar in all factors except pH, tyrosine, TBA value and redness ($p<0.05$). Frozen storage affected all parameters except tenderness ($p<0.514$), ERV ($p<0.159$), and color L ($p<0.560$), and b ($p<0.460$) values significantly. WHC and pH decreased, whereas cooking loss, tyrosine and TBA values increased due to freezing. Although fresh camel meat had a smaller “a” value than beef, during frozen storage, the redness of camel meat increased significantly, whereas that of beef showed a non-significant decrease ($p<0.05$). With regard to the functional properties results indicated no significant difference between camel meat and beef in pH ($p<0.064$), WHC ($p<0.821$), FC ($p<0.552$), FS10 ($p<0.527$), FS30 ($p<0.469$), FS60 ($p<0.305$), BCpHu-4.5 ($p<0.063$) and BCpHu-7 ($p<0.853$). However, Camel meat showed higher EC (M=45.46) and ES (M=71.23) relative to beef (resp. M=43.83 and M=66.22). Freezing caused significant differences: EC, ES, FS and BC increased, whereas pH and WHC decreased. Although fresh camel meat had lower emulsifying properties than beef, it showed more EC and ES after 2 and 5 months storage relative to beef ($p<0.05$). Generally, our findings suggest that meat quality (within the parameters of present study) is mainly affected by freezing rather than by species. The meat of camels 5 years old or less is comparable in physicochemical and functional properties to beef. Also, it seems that frozen storage up to 5 months mainly has similar effect on both species.

Key Words: camel meat, functional properties, frozen storage

22P Qualitative characteristics of beef value cuts from Holstein and Angus cattle. E. E. Helman*, C. S. Quinlan, N. L. Berry, C. S. Abney, C. P. Allison, S. R. Rust, W. N. Osburn, and M. E. Doumit, *Michigan State University*, *East Lansing*.

Our objective was to determine the acceptability of value cut muscles from the chuck and round of Holstein beef carcasses. Calf-fed Holstein steers (**Holstein**), Holstein steers implanted with Ralgro on days 1 and 112 and Synovex-S on day 196 in the feedlot (**Holstein-Implant**) and yearling Angus steers implanted with Ralgro on feedlot day 1 and Synovex-S on day 84 (**Angus**) were used. Initial weights of Holstein and Angus cattle in the feedlot were 173 and 435 kg, respectively. USDA Choice carcasses of fourteen cattle from each group were selected, and the average carcass weight was similar (368 kg) among groups. Value cut muscles included triceps brachii long head (**TBLG**), triceps brachii lateral head (**TBLT**), infraspinatus (**IS**), teres major (**TM**), rectus femoris (**RF**), vastus lateralis (**VL**) and biceps femoris (**BF**). *Longissimus* muscle (**LM**)