Caprine brucellosis is a chronic infectious disease caused by Brucella melitensis. Yet, B. melitensis can infect other animal species, including man. The diagnosis of brucellosis in goats is based on clinical examination and bacteriological detection studies. However, goats may not present clinical signs and bacteria isolation is laborious and sometimes unsuccessful. For that reason, serological tests have been used for routine laboratory diagnosis, based on antibody detection in host sera. Currently diagnostic tests include Rose Bengal (RB), Buffer plate agglutination (BPA), Wright (SAT), 2 mercaptoethanol (2ME), fluorescence polarization (FPA), indirect ELISA (IELISA) and complement fixation (CF), all of them use B. abortus 1119/3 as antigen either as a whole bacteria or the O side chain (FPA). The objective of this study was to evaluate the screening tests available for diagnosis of caprine brucellosis.

Material and methods: The following diagnostic tests were used: BPA, RB (8% of cellular antigen concentration) and FPA. Goats sera samples (n=1,150) were obtained from different geographic areas of Argentina, where no brucellosis vaccine is used. FPA was done in a portable machine Sentry 100 and the cut-off value for this test was 86 mP as previously determined. Validity of the test (sensitivity and specificity) was determined in relation to combination of IELISA and CF.

Results and discussion: Sensitivity and specificity values obtained were 98.14% and 97.00% for BPA, 92.17% and 98.73% for RB and 83.91% and 97.42% for FPA, respectively. Among the screening tests used to detected antibodies against B. melitensis, BPA show the best performance. Although Rose Bengal is a very well known screening test for cattle, it did not show to be the test to choose as screening for goats. However, reduction of cellular volume of RB antigen could provide better results.

FPA could be useful as a confirmatory test after review its cutoff which will be diferente for those places where REV 1 vaccine is used.

Conclusion: This data showed that we should consider the BPA test as screening for caprine brucellosis.