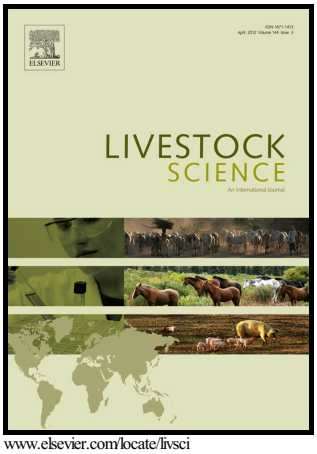

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Running head: Gel embedding of separated bovine blastomere

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ABSTRACT

This study aimed to examine how gel embedding compared with the Well-of-Well (WOW) system when culturing bovine separated blastomeres, in terms of developmental competence rates and blastocyst quality. We first optimized the gel-embedding method via culturing intact zygotes in either 1% agarose or 1% calcium alginate gel. Gel-embedded groups and control did not differ in development rates, but the 1% calcium alginate group was selected for subsequent experiments due to higher blastocyst recovery. The separated embryo group had higher potential for blastocyst production than the intact embryo group. Among separated blastomeres (2- and 8-cell), WOW and 1% calcium alginate did not differ in blastocyst formation rate, except between the 2-cell alginate and WOW groups, with the