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Title: Preparation of ELISA kits for detection of antibodies to Bovine herpes virus-1.

7- ABSTRACT

In this study, an ELISA was developed for detection of antibodies against BHV-1 antibodies BHV-1. Colorado strain of BHV-1 was propagated on MDBK cell and characterized by using SNT and FAT. The virus was titrated after and before concentration by polyethylene glycol (PEG). The protein contents of the concentration virus were determined. In the optimization steps of ELISA kit the best results obtained when antigen concentration used (5µg/ml) and in $^{1}/_{25}$ dilution of serum were used. The efficiency of the prepared ELISA was studied by comparison the results with those of SNT when applied both tests on 86 serum samples. Eight five % of these samples were positive by ELISA and only 61% were positive by SNT. Comparison between the prepared ELISA and SNT as well as commercial ELISA kit was carried out. A slight difference was reported. Application of the prepared ELISA kits was employed on the screening of 354 serum samples collected from 5 different localities, El Behira (vaccinated), Sharkia, Menofia, El Fayoyum and Kafr El Sheik. The prevalent percent of anti BHV-1 antibodies were 95, 88, 80, 38, and 48 respectively. Also analysis of the obtained ELISA results revealed that samples of cattle were high prevalence percentage than those of buffalo. In conclusion, the present study reports the development of a locally prepared ELISA hits for detection of anti BHV-1 antibodies and the success of these kits in the field application trial.

CONTENTS

List of Abbreviations

ABTS	2.2 Azino – Bis (3 Ethylben – 3 Thiazoline – 6 sulfonic acid, diammonium salt)
AGPT	Agar Gel precipitation test.
BHV-1	Bovine herpes virus-1.
C.P.E	Cytopathic effect
C.F	Complement Fixation
ELISA	Enzyme Linked Immuno sorbent assay.
FAT	Fluorescent antibody technique.
FCS	Fetal calf serum
gp	glycoprotiens
HA	Haemagglutination
HI	Haem Inhibition
IBR	Infections Bovine rhinotracheitis
IFA	Indirect Fluorescent antibody
IPV	Infections pustular vulvovaginitis
IPB	Infections pustular Balanopothitis
MDBK	Madin Darby bovine kidney cell
MEM	Minimal essential Medivm
NFDM	Non Fat Dry Milk
PBS	Phosphate buffer saline
PHA	Passive Haemagglutination
PEG	Polyethy lene Glycol
RH	Relative humidity
RPM	Revolution per minute
SNT	Serum neutralization test
TCID50	Tissue culture Infective Dose 50
ug	Microgram
ul	Microgram
ml	Milli liter