



Anti-HBc Total Elisa

KAPG4CBE3



Anti-HBc Total Elisa

For qualitative detection of total antibody to hepatitis B virus core antigen
(anti-HBc Total) in human serum or plasma

en

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IN VITRO DIAGNOSTIC USE

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1) INTENDED USE

ANTI-HBc Total ELISA is an enzyme immunoassay for in vitro qualitative detection of total antibody to hepatitis B virus core antigen (Anti-HBc Total) in human serum or plasma (heparin, EDTA or citrate)

2) SUMMARY AND TEST EXPLANATION

The hepatitis B virus (HBV) consists of an external envelope (HBsAg) and an inner core (HBcAg). In acute HBV infection, antibody to HBcAg (Anti-HBc) is detectable in serum or plasma shortly before clinical symptoms and slightly after the appearance of HBsAg. In cases in which HBV infection resolves, anti-HBc appears in blood during the window period following loss of HBsAg and prior to the development of antibody to HBsAg (anti-HBs). Anti-HBc is found in acute and chronic hepatitis B patients and also indicates past resolved infection. Therefore, detection of anti-HBc is indicative of exposure to HBV and thus of infection by this virus. Further testing of HBV serological markers is required to define the specific disease state.¹⁻⁶

ANTI-HBc TOTAL ELISA is a fast test for the qualitative detection of the presence of antibodies to HBcAg in serum or plasma (heparin, citrate or EDTA) specimens. The test utilizes HBcAg on microtiter wells and human peroxidase-conjugated Anti-HBc in a competition principle to detect Anti-HBc levels in serum or plasma.

Specimens with absorbance values greater than $1.1 \times \text{Cutoff Value}$ are considered **NEGATIVE** for Anti-HBc.

Specimens with absorbance values less than $0.9 \times \text{Cutoff Value}$ are considered **POSITIVE** for Anti-HBc.

The test has to be repeated in duplicate for specimens with absorbance value within the retest range ($\text{Cutoff Value} \pm 10\%$) and interpreted as above. If the absorbance of any of the specimens retested in duplicate is still within the retest range, it is suggested to test follow-up samples of the patient.

3) TEST DESCRIPTION

ANTI-HBc TOTAL ELISA is a solid-phase enzyme immunoassay (ELISA= enzyme-linked immune assay) - based on a competitive principle. The solid phase of the microtiter plate is made of polystyrene wells coated with HBcAg and the liquid phase of human peroxidase conjugated Anti-HBc. When a serum or plasma specimen containing Anti-HBc is added to the HBcAg-coated wells together with the human peroxidase conjugated Anti-HBc and incubated, a competition will take place for the binding to the HBcAg on the wells. (HBcAg)-(Anti-HBc • peroxidase) complex and/or (HBcAg)-(Anti-HBc) complex will form on the wells. After washing of the microtiter plate to remove unbound material, a solution of TMB substrate is added to the wells and incubated. Due to the competitive principle a color develops inversely proportional to the amount of Anti-HBc bound to HBcAg deriving from the specimen. The peroxidase-TMB reaction is stopped by addition of sulfuric acid. The optical density of developed color is read with a suitable photometer at 450 nm with a selected reference wavelength within 620 to 690 nm¹.

The above test principle is shown also in the following figure.

A Specimen containing Anti-HBc:

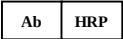
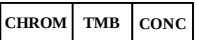
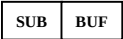
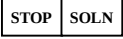
1. Plate well (HBcAg) + specimen (Anti-HBc) + Anti-HBc • peroxidase
→ Plate-HBcAg-Anti-HBc complex and Plate-HBcAg-Anti-HBc • peroxidase complex
2. + TMB substrate solution → blue to light to pale blue color/even colorless
3. Add sulfuric acid to stop the color development → Read OD at 450nm with a selected reference wavelength within 620 to 690nm⁸.

B Specimen without Anti-HBc:

1. Plate well (HBcAg) + specimen (without Anti-HBc) + Anti-HBc • peroxidase
→ Plate-HBcAg-Anti-HBc-peroxidase complex
2. + TMB substrate solution → blue to light blue color
3. Add sulfuric acid to stop the color development, read OD at 450nm with a selected reference wavelength within 620 to 690nm^{*1}.

4) DESCRIPTION OF MATERIALS PROVIDED

●Item 1 - 6 on the following reagent table should be refrigerated at +2 to +8°C . Washing Solution (20x) and stop solution can be stored at +2 to +30°C.

ITEMS	Components	Description	Qt. per 96 tests
(1)	 HBcAg Plate	Microtiter plate coated with HBcAg.	1 plate
(2)	 Anti-HBc · Peroxidase Solution	Anti-HBc (human) · peroxidase conjugate dissolved in buffer with protein stabilizers. Preservatives: 0.003% Gentamycin and 0.01% Thimerosal.	1bottle, 7 ml
(3)	 Anti-HBc Positive Control	Anti-HBc positive serum in buffer with protein stabilizers. Preservatives: 0.003% Gentamycin and 0.01% Thimerosal.	1 bottle, 1.1 ml
(4)	 HB Negative Control	Serum non-reactive for HBV markers. Preservatives: 0.003% Gentamycin and 0.01% Thimerosal.	1 bottle, 1.6 ml
(5)	 Chromogenic TMB concentrate	0.6 mg/ml of 3,3',5,5'-tetramethylbenzidine (TMB) in 40% methanol.	1 bottle, 10 ml
(6)	 Substrate buffer	Citrate acid buffer containing 0.03% H ₂ O ₂ .	1 bottle, 10 ml
(7)	 Conc. Washing Solution (20x)	Concentrated phosphate buffer with Tween-20	1 bottle 52 ml
(8)	 Stop solution	2N H ₂ SO ₄ (Sulfuric Acid)	1 bottle 12 ml

● OTHER MATERIAL REQUIRED, BUT NOT PROVIDED

ITEMS	Components
(1)	50µl, 100µl micropipettes and tips are needed
(2)	Incubator or waterbath with temperature control at +37 °C.
(3)	Plate washing equipment.
(4)	ELISA microwell reader: Dual wavelength 450nm with 620-690nm as reference wavelength ^{†1} , bandwidth 10nm.
(5)	Fully automatic EIA micro-plate analyzer is optional. User should validate the automatic EIA micro-plate analyzer in combination with the kit.

4.1) STORAGE CONDITIONS AND STABILITY OF KIT AND COMPONENTS*

Kit/Components	Storage condition	State	Stability
ANTI-HBc TOTAL ELISA KIT	+2 to +8 °C	Original	18 months
		Once open	1 month
Anti-HBc Positive Control	+2 to +8 °C	Original	18 months
		Once open	1 month
HB Negative Control	+2 to +8 °C	Original	18 months
		Once open	1 month
HBcAg Plate	+2 to +8 °C	Original	24 months
		Once open	2 month
Anti-HBc · Peroxidase Conjugate Solution	+2 to +8 °C	Original	18 months
		Once open	1 month
Concentrated Washing Solution (20x)	Room temp.	Original	24 months
		Once open	1 month

20x Diluted Washing Solution	Room temp.	Diluted	2 days
	+2 to +8 °C	Diluted	1 week
Chromogenic TMB concentrate	+2 to +8 °C	Original	18 months
		Once open	1 month
Substrate Buffer	+2 to +8 °C	Original	18 months
		Once open	1 month
Stop solution	Room temp.	Original	24 months
		Once open	1 month

5) INSTRUCTIONS FOR USE

5.1) Warnings:

- 5.1.1) This reagent kit is for professional use only.
- 5.1.2) This reagent kit is for in vitro diagnostic use only.
- 5.1.3) Bring all kit reagents and samples to room temperature (+20 to +30°C) and mix carefully before use.
- 5.1.4) Do not use reagent beyond its expiration date.
- 5.1.5) Do not interchange reagents between different lots.
- 5.1.6) Do not pipette in the mouth.
- 5.1.7) Do not smoke or eat in areas where specimens or reagents are handled.
- 5.1.8) The positive control, negative control, conjugate solution and specimens should be regarded as potential hazards to health. They should be used and discarded according to the user's laboratory safety procedures. Such safety procedures probably will include the wearing of protective gloves and avoiding the generation of aerosols.
- 5.1.9) Potential infectious specimens and nonacid containing spills or leakages should be wiped up thoroughly with 5% sodium hypochlorite or treated in accordance with the laboratory's practice for potential bio-hazard control.
- 5.1.10) Prior to dispose the waste of used specimens and kit reagents as general waste, it should be treated in accordance with the local procedures for potential bio-hazardous waste or treated as follows:
Both liquid and solid waste should be autoclaved maintaining +121°C for at least 30 minutes.
Solid waste can also be incinerated.
Non-acidic liquid waste can be treated with sodium hypochlorite diluted to a final concentration of 1%.
Acidic liquid wastes must be neutralized before treatment with sodium hypochlorite as mentioned above and should stand for 30 minutes to obtain effective disinfection.
- 5.1.11) Stop solution is an irritant to skin, eyes, respiratory tract and mucous membranes. Avoid contact of the stop solution with skin and mucous membranes. In case of contact, clean with large lots of water immediately.
In case of inhalation, supply fresh air and seek medical advice in case of complaints.
- 5.1.12) Chromogenic TMB concentrate contains 40% methanol which is toxic: danger of serious irreversible effects through inhalation, in contact with skin and if swallowed. Chromogenic TMB concentrate contains dimethyl sulfoxide, an irritant to skin and mucous membranes.
- 5.1.13) Although all human sourced material are tested non-reactive for Anti-HCV and Anti-HIV, and inactivated at +56 °C for one hour, the reagent shall be handled as potential infectious material ¹⁷.

5.2) Specimen Collection and Preparation for Analysis

- 5.2.1) No special preparation of the patient is required prior to blood collection. Blood should be collected by approved medical techniques.
- 5.2.2) Either serum or plasma can be used with this diagnostic kit. Whole blood specimen should be separated as soon as possible in order to avoid hemolysis. Any particulates (e.g. fibrin clots, erythrocytes) contained in the specimen should be removed prior to use.
- 5.2.3) Specimens must be stored at +2 to +8°C and avoided heat-inactivation to minimize deterioration. For long-term storage, specimens should be frozen below -20°C. Storage in self-defrosting freezers is not recommended.
- 5.2.4) Frozen specimens must be thoroughly thawed and mixed homogeneously before test.
- 5.2.5) Avoid multiple freeze-thaw procedures
- 5.2.6) **WARNINGS**
 - 1. The specimen must not contain any AZIDE compounds which can inhibit the peroxidase activity of the conjugate.
 - 2. Incompletely coagulated serum samples and microbial-contaminated specimens should not be used.

5.3) Reagents Storage

- 5.3.1) The kit must be stored at +2 to +8°C. Do not freeze.
- 5.3.2) Strips of the plate should be used within 2 months after opening the original aluminum foil bag. The unused strips should be kept in the aluminum foil bag and taped the opening tightly.
- 5.3.3) Return reagents to +2 to +8°C immediately after use.
- 5.3.4) Washing Solution (20x) Concentrate is stored and shipped at +2 to +8°C, which can cause crystallization. If the crystal has been precipitated before use, warm up the solution in +37°C water bath till the crystal is dissolved.

5.4) Plate Washing Procedure

- 5.4.1) Preparation of washing solution:
Dilute Washing Solution (20x) Concentrate with distilled or de-ionized water to 1:20 dilution. Do not use tap water.
- 5.4.2) Plate washing:
 - (a) For plate washer with overflow aspirating function: 6 cycles with at least 0.5ml washing buffer per well per cycle.
 - Or
 - (b) For plate washer without overflow aspirating function: 8 cycles with at least 0.35ml washing buffer per well per cycle.
- 5.4.3) Blot dry by inverting the plate and tapping firmly onto absorbent paper. Too much residual wash buffer will cause false results.
!! WARNING
Improper washing will cause false results.

5.5) Test Procedure

- 5.5.1) Bring all reagents and specimens to room temperature (+20 to +30°C) before assay. Adjust water bath or incubator to +37±1°C.
5.5.2) Reserve 2 wells for blanks. Add 50µl of each control or specimen to appropriate wells of reaction plate (3 Negative Controls and 2 Positive Controls).



NOTE:

- a) Use a new pipette tip for each sampling to avoid cross-contamination
b) Each plate needs its own negative controls, positive controls and blank wells.
c) Do not use cut-off value established for other plates of ANTI-HBc TOTAL ELISA.
5.5.3) Add 50 µl of Anti-HBc· Peroxidase solution to each well except the 2 blanks.



NOTE: Do not touch the well wall for preventing contamination.

- 5.5.4) Gently tap the plate.
5.5.5) Remove the protective backing from the adhesive slip and press it onto the reaction plate, so that it is tightly sealed.
5.5.6) Incubate the reaction plate in a +37±1°C water bath or incubator for 1 hour.
5.5.7) At the end of the incubation period, remove and discard the adhesive slip and wash the plate in accordance with 5.4) Plate washing procedure.
5.5.8) Select one of the following two methods for color development:
A. Mix equal volumes of Chromogenic TMB concentrate and Substrate buffer in a clean container immediately prior to use. Add 100 µl of the mixture solution to each well including 2 blank wells.
B. Add 50 µl of Chromogenic TMB concentrate first, then add 50 µl of Substrate Buffer into each well including the 2 blanks. Mix well gently.



NOTE: Chromogenic TMB concentrate should be colorless to light blue, otherwise, it should be discarded. The mixture of Chromogenic TMB concentrate and Substrate buffer should be used within 30 minutes after mix. The mixture should be protected from exposition to intense light.

- 5.5.9) Cover the plate with black cover and incubate at room temperature for 15 minutes.
5.5.10) Stop the reaction by adding 100µl of stop solution to each well including the two blanks.
5.5.11) Determine the absorbance of controls and test specimens within 30 minutes with a precision photometer at 450 / 620-690 nm (450 nm reading wavelength with 620-690 nm reference wavelength)*¹. Use the first blank well to blank the photometer.



NOTE:

The blanks should be colorless to light yellowish in color; otherwise, the test results are invalid. In this case the tests must be repeated.

Substrate blank : absorbance value must be less than 0.100.

5.6) Calculation of Test Results

- 5.6.1) Calculation of the NCx (Mean Absorbance of Negative Control).

Example:

Sample No.	Absorbance
1	0.939
2	0.944
3	0.925

$$NCx = (0.939 + 0.944 + 0.925) / 3 = 0.936$$

NCx must be ≥ 0.4 , otherwise, the test run is invalid.

- 5.6.2) Calculation of the PCx (Mean Absorbance of Positive Control)

Example:

Sample No.	Absorbance
1	0.068
2	0.052

$$PCx = (0.068 + 0.052) / 2 = 0.060$$

PC x must be ≤ 0.1 , otherwise, the test run is invalid.

- 5.6.3) Calculation of the N - P Value

$$N - P = NCx - PCx$$

Example:

$$N - P = 0.936 - 0.060 = 0.876$$

N - P Value must be ≥ 0.3, otherwise, the test run is invalid.

- 5.6.4) Calculation of the Cutoff Value

$$\text{Cutoff Value} = 0.4 NCx + 0.6 PCx$$

Example:

$$\text{Cutoff Value} = (0.4 \times 0.936) + (0.6 \times 0.060) = 0.410$$

- 5.6.5) Calculation of the Retest Range

$$\text{Retest Range} = \text{Cutoff Value} \pm 10\%$$

Example: Cutoff Value = 0.410

$$\text{Retest Range} = (0.410 - 0.041) \text{ to } (0.410 + 0.041) = 0.369 \text{ to } 0.451$$

5.7) Validity of Test Runs

5.7.1) **NC x must be ≥ 0.4 , otherwise, the test run is invalid.**

5.7.2) **PC x must be ≤ 0.1, otherwise, the test run is invalid.**

5.7.3) **N-P Value must be ≥ 0.3, otherwise, the test is invalid.**

5.8) Interpretation of Results

Specimens with absorbance values greater than 1.1 x Cutoff Value are considered NEGATIVE for Anti-HBc.

Specimens with absorbance values less than 0.9 x Cutoff Value are considered POSITIVE for Anti-HBc.

If the signal/cut-off ratio is within Retest Range (0.9-1.1 x cutoff), the test must be repeated in duplicate and interpreted as above. If both results are non-reactive the final result is non-reactive, if both results are reactive the final result is reactive. Any other combination is an indeterminate result. Testing of follow up samples and other hepatitis B serological markers should be taken into account in case of an indeterminate result.

5.9) Troubleshooting

If the result cannot be reproduced, a preliminary troubleshooting should be performed by checking the possibilities listed below:

5.9.1) Improper washing procedure.

5.9.2) Contaminated with positive specimen.

5.9.3) Wrong volume of sample, conjugate or substrate.

5.9.4) Contamination of well edge with conjugate.

5.9.5) Improper specimen such as hemolyzed serum or plasma, specimen containing precipitate and specimen not thoroughly mixed before use.

5.9.6) Wrong incubation time or temperature.

5.9.7) Obstructed or partial obstructed washer aspirate/dispense head and needles.

5.9.8) Insufficient aspiration.

5.10) Limitations and Interferences

5.10.1) This reagent kit is to be used for un-pooled human serum or plasma samples only.

5.10.2) The reagent kit has not been validated for use with cadaveric samples.

5.10.3) Non-repeatable false positive results may be obtained with any enzyme immunoassay kit, largely due to technical error either on the part of the operator or malfunction of apparatus used.

5.10.4) Potential interfering substances:

Potential interfering samples, i.e. samples with hyperlipemia, hemolysis, hyper-bilirubinemia, and samples with monoclonal immunoglobulin components, samples containing elevated levels of autoimmune antibodies (rheumatoid factor-RF, antinuclear antibodies-ANA, or anti-mitochondrial antibodies-AMA) did not affect the test result with ANTI-HBc TOTAL ELISA.

5.10.5) The anticoagulants heparin, EDTA and sodium citrate have no influence on the specificity of ANTI-HBc TOTAL ELISA and can be used to obtain plasma samples for analysis with the Anti-HBc Total kit.

5.11) Performance Characteristics

5.11.1) Diagnostic Specificity

Negative specimens/Specimens used to evaluate the specificity

True Negative Samples		ANTI-HBc TOTAL ELISA
Type of sample	Number of samples	No. negative samples
Blood donor samples	5020	5010
Samples from hospitalized persons	200	200
Samples contain potential interfering factors	97	97
Samples with added possible interfering factors	12	11
Samples with different anticoagulants	48	48
Total	5377	5366
Diagnostic Specificity	-----	5366/5377 = 99.8%

5.11.1.1) Potential interfering substances

Potential interferences with ANTI-HBc TOTAL ELISA (TMB) assay were investigated.

For each potential interfering substance, at least two serum samples containing different amounts of the potentially interfering substance were mixed in fixed ratios of 10 + 0; 7 + 3; 5 + 5; 3 + 7; 0 + 10 with other serum samples containing increased Anti-HBc Total levels but no interfering factors. The neat samples as well as the mixtures were analyzed.

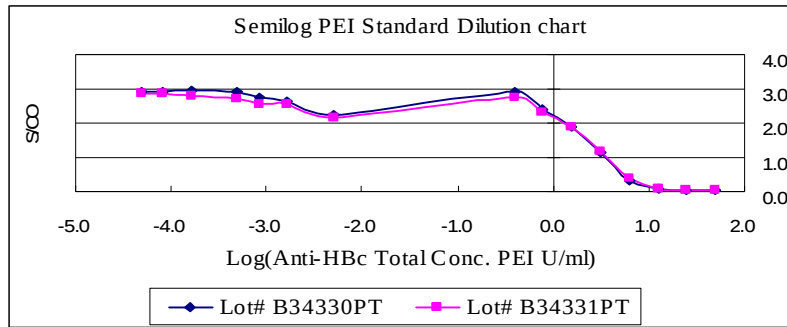
In particular the specificity study included:

- lipemic (turbid) samples (hyperlipidemia) before and after high speed centrifugation
- hemolytic samples or hemolysate
- icteric samples (=hyperbilirubinemia)
- samples with monoclonal immunoglobulin components (hyperimmunoglobulinemia)
- samples containing elevated levels of autoimmune antibodies (rheumatoid factor - RF, antinuclear antibodies –ANA, or antimitochondrial antibodies-AMA).

No interferences were detected with both used lots. Neither the type of anticoagulant had an influence on both tested lots of ANTI-HBc TOTAL ELISA.

5.11.2) Analytical Sensitivity and Linearity:

To evaluate the sensitivity of ANTI-HBc TOTAL ELISA serial dilutions of the Standard Material for Anti-HBc Total of Paul Ehrlich Institute (PEI) (Langen, Germany) (100 PEI U/ml) were used.



For Lot# B34330PT: Linearity ,R=			-0.994
For Lot# B34331PT: Linearity, R =			-0.991
Worst Case: Linearity, R =			-0.991
Lot#	A	B	
B34330PT	2.1397	-2.0009	
B34331PT	2.0757	-1.8801	
Lot#	X=(Y-A)B		
B34330PT	Detection Limit =	1.858	PEI U/ml
B34331PT	Detection Limit =	1.869	PEI U/ml
Worst Case	Detection Limit =	1.869	PEI U/ml

The analytical sensitivity (detection limit) was defined as the lowest concentration which can be detected, i.e. at CO/S $\geq$ 1.1 (i.e. S/CO $\leq$ 0.9) calculated by using the linear regression function.

5.11.3) Diagnostic Sensitivity

5.11.3.1) HBV infected individuals

435 HBV-positive samples were measured with both ANTI-HBc TOTAL ELISA and the reference assay. The diagnostic sensitivity for the DAsource assay was 100% as it was for the reference assay.

5.11.3.2) Commercial seroconversion panels

Eight commercially available seroconversion panels consisting of follow-up samples which were collected at weekly or monthly intervals from patients suffering from acute hepatitis B, have been used. The panels were obtained from Boston Biomedica Inc., BBI; West Bridgewater, MA USA (PHM 933, PHM 934 and PHM 935A); Pyramid-Profile Diagnostics, Sherman Oaks, CA, USA (RP 009, RP 016 and RP 017) and NABI, Boca Roton, FL, USA (SB 411 and SB 413). All the panels have been characterized for HBV-specific serological markers (anti-HBs, anti-HBc IgM, anti-HBc-Total, and HBsAg).

By testing of the seroconversion panels ANTI-HBc TOTAL ELISA detected Anti-HBc Total one bleed earlier in the NABI panel RP-009 and the reference assay detected the Anti-HBc Total two bleeds earlier in the BBI Panel 935A and one bleed earlier in the NABI panel RP-017. In the other 5 panels, the ANTI-HBc TOTAL ELISA and the reference assay detected Anti-HBc Total in the same bleed.

In summary there was no significant difference between the DAsource ANTI-HBc TOTAL ELISA assay and the reference assay.

5.11.4) Precision

5.11.4.1) Intra-run repeatability

For determination of intra-assay (within-run) precision, the Positive Control provided with the test kit and two patient serum samples with different Anti-HBc Total titer (slightly above the cutoff level and at medium level) were analyzed in replicates of 20 in a single "run" over 3 days. The CVs were in an acceptable range for both tested lots.

Item tested	Sample size	Precision
Positive Control	N = 20	CV $\leq$ 12.68%
Patient Serum #1	N = 20	CV $\leq$ 10.62%
Patient Serum #2	N = 20	CV $\leq$ 16.72%

5.11.4.2) Inter-run reproducibility

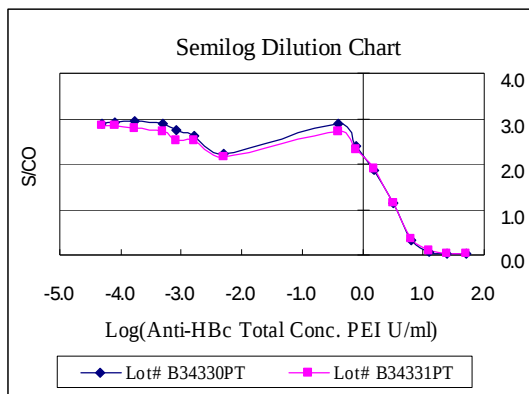
Item tested	Sample size	Precision
Positive Control	N = 60	CV $\leq$ 7.44%
Patient Serum #1	N = 60	CV $\leq$ 8.81%
Patient Serum #2	N = 60	CV $\leq$ 14.67%

5.11.5) Traceability

Concentration of Positive Control of ANTI-HBc TOTAL ELISA referred to the PEI Anti-HBc Total Reference Material = 70 PEI U/ml $\pm$ 30%

5.11.6) Antibody Excess/High-Dose Hook Effect

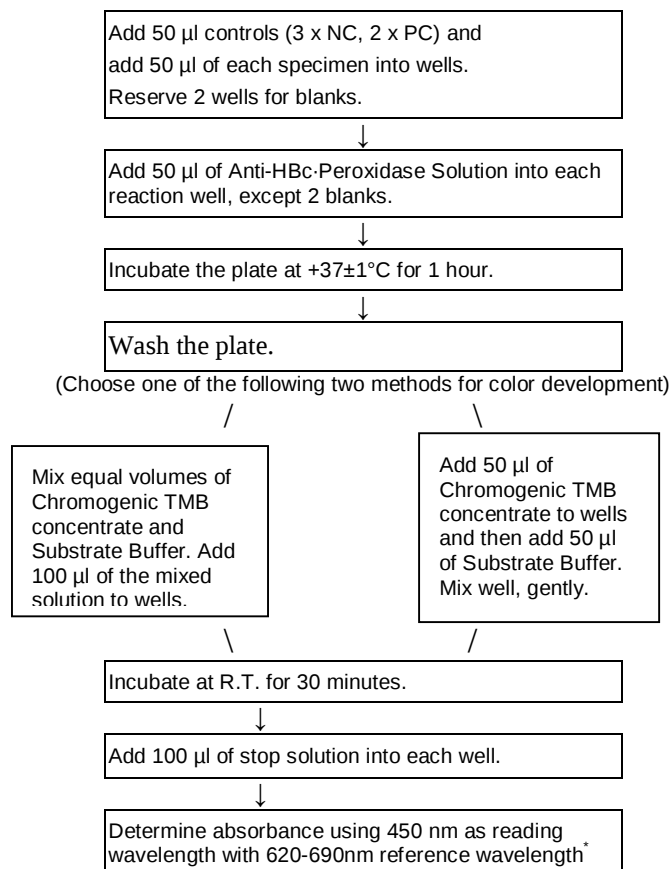
The effect of antibody excess was tested by consecutive dilution of a standard material having very high Anti-HBc levels (PEI Anti-HBc Total Reference Material).



The Semilog PEI Standard Dilution chart illustrates that an antigen/antibody excess is not occurring also because of the reverse reaction used in this assay format.

An antigen/antibody excess will not influence the reactive/non-reactive interpretation.

5.12) Flow Chart of Test Procedure



6) BIBLIOGRAPHY

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7. Shikata T, Karasawa T, Abe K, et al. Incomplete inactivation of hepatitis B virus after heat treatment at +60°C for 10 hours, *J. Infect. Dis.* 1978; 138:242-244.

NOTES:

- *1 The reference wavelength of spectrometer can be 620nm to 690nm. However, user should validate the photometer in combination with this kit before use.

Revision date : 2009-05-15

	<u>Used symbols</u>	<u>Symboles utilisés</u>
	Consult instructions for use	Consulter les instructions d'utilisation
	Storage temperature	Température de conservation
	Use by	Utiliser jusque
	Batch code	Numéro de lot
	Catalogue number	Référence de catalogue
	Control	Contrôle
	In vitro diagnostic medical device	Dispositif médical de diagnostic in vitro
	Manufacturer	Fabricant
	Contains sufficient for <n> tests	Contenu suffisant pour <n> tests
	Wash solution concentrated	Solution de lavage concentrée
	Zero calibrator	Calibrateur zéro
	Calibrator #	Calibrateur #
	Control #	Contrôle #
	Tracer	Traceur
	Tracer	Traceur
	Tracer concentrated	Traceur concentré
	Tracer concentrated	Traceur concentré
	Tubes	Tubes
	Incubation buffer	Tampon d'incubation
	Acetonitrile	Acétonitrile
	Serum	Sérum
	Specimen diluent	Diluant du spécimen
	Dilution buffer	Tampon de dilution
	Antiserum	Antisérum
	Immunoabsorbent	Immunoabsorbant
	Calibrator diluent	Diluant de calibrateur
	Reconstitution solution	Solution de reconstitution
	Polyethylene glycol	Glycol Polyéthylène
	Extraction solution	Solution d'extraction
	Elution solution	Solution d'élution
	Bond Elut Silica cartridges	Cartouches Bond Elut Silica
	Pre-treatment solution	Solution de pré-traitement
	Neutralization solution	Solution de neutralisation
	Tracer buffer	Tampon traceur
	Microtiterplate	Microplaque de titration
	HRP Conjugate	HRP Conjugué
	HRP Conjugate	HRP Conjugué
	HRP Conjugate concentrate	HRP Conjugué concentré
	HRP Conjugate concentrate	HRP Conjugué concentré
	Conjugate buffer	Tampon conjugué
	Chromogenic TMB concentrate	Chromogène TMB concentré
	Chromogenic TMB solution	Solution chromogène TMB
	Substrate buffer	Tampon substrat
	Stop solution	Solution d'arrêt
	Incubation serum	Sérum d'incubation
	Buffer	Tampon
	AP Conjugate	AP Conjugué
	Substrate PNPP	Tampon PNPP
	Biotin conjugate concentrate	Biotine conjugué concentré
	Avidine HRP concentrate	Avidine HRP concentré
	Assay buffer	Tampon de test
	Biotin conjugate	Biotine conjugué
	Specific Antibody	Anticorps spécifique
	Streptavidin HRP concentrate	Concentré streptavidine HRP
	Non-specific binding	Liant non spécifique
	2nd Antibody	Second anticorps
	Acidification Buffer	Tampon d'acidification

	<u>Gebruikte symbolen</u>	<u>Gebrauchte Symbolen</u>
	Raadpleeg de gebruiksaanwijzing	Gebrauchsanweisung beachten
	Bewaartemperatuur	Lagern bei
	Houdbaar tot	Verwendbar bis
	Lotnummer	Chargenbezeichnung
	Catalogusnummer	Bestellnummer
	Controle	Kontrolle
	Medisch hulpmiddel voor in-vitro diagnostiek	In Vitro Diagnostikum
	Fabrikant	Hersteller
	Inhoud voldoende voor <n> testen	Ausreichend für <n> Ansätze
	Wasoplossing, geconcentreerd	Waschlösung-Konzentrat
	Nulkalibrator	Null kalibrator
	Kalibrator #	Kalibrator #
	Controle #	Kontrolle #
	Tracer	Tracer
	Tracer	Tracer
	Tracer geconcentreerd	Tracer Konzentrat
	Tracer geconcentreerd	Tracer Konzentrat
	Buisjes	Röhrchen
	Incubatiebuffer	Inkubationspuffer
	Acetonitrile	Azetonitril
	Serum	Humanserum
	Specimen diluent	Probenverdünner
	Verdunningsbuffer	Verdünnungspuffer
	Antiserum	Antiserum
	Immunoabsorbent	Immunadsorbens
	Kalibratorverdunner	Kalibratorverdünnung
	Reconstitutieoplossing	Rekonstitutionslösung
	Polyethyleen glycol	Polyethylenglykol
	Extractieoplossing	Extraktionslösung
	Elutieoplossing	Eluierungslösung
	Bond Elut Silica kolom	Bond Elut Silikakartuschen
	Pre-behandelingsoplossing	Vorbehandlungslösung
	Neutralisatieoplossing	Neutralisierungslösung
	Tracerbuffer	Tracer-Puffer
	Microtiterplaat	Mikrotiterplatte
	HRP Conjuaat	HRP Konjugat
	HRP Conjuaat	HRP Konjugat
	HRP Conjuaat geconcentreerd	HRP Konjugat Konzentrat
	HRP Conjuaat geconcentreerd	HRP Konjugat Konzentrat
	Conjuaat buffer	Konjugatpuffer
	Chromogene TMB geconcentreerd	Chromogenes TMB Konzentrat
	Chromogene Oplossing TMB	Farblösung TMB
	Substraatbuffer	Substratpuffer
	Stopoplossing	Stopplösung
	Incubatieserum	Inkubationsserum
	Buffer	Puffer
	AP Conjuaat	AP Konjugat
	Substraat PNPP	Substrat PNPP
	Geconcentreerd Biotine conjuaat	Biotin-Konjugat-Konzentrat
	Geconcentreerd Avidine-HRP conjuaat	Avidin-HRP-Konzentrat
	Assay buffer	Assaypuffer
	Biotine conjuaat	Biotin-Konjugat
	Specifiek antilichaam	Spezifischer Antikörper
	Streptavidine-HRP concentraat	HRP Streptavidinkonzentrat
	Aspecifieke binding	Unspezifische Bindung
	2de antilichaam	Sekundärer Antikörper
	Verzuringbuffer	Ansäuerungspuffer

	<u>Simboli utilizzati</u>	<u>Símbolos utilizados</u>
	Consultare le istruzioni per l'uso	Consultar las instrucciones de uso
	Limitazioni di temperatura	Limitación de temperatura
	Utilizzare entro	Fecha de caducidad
	Numero di lotto	Código de lote
	Numero di catalogo	Número de catálogo
	Controllo	Control
	Dispositivo medico-diagnostico in vitro	Producto sanitario para diagnóstico in vitro
	Fabbricante	Fabricante
	Contenuto sufficiente per <n> saggi	Contenido suficiente para <n> ensayos
	Tampone di lavaggio concentrato	Solución de lavado concentrada
	Calibratore zero	Calibrador cero
	Standard #	Calibrador #
	Controllo #	Control #
	Marcato	Trazador
	Marcato	Trazador
	Marcato concentrato	Trazador concentrada
	Marcato concentrato	Trazador concentrada
	Provette	Tubos
	Tampone incubazione	Tampón de incubación
	Acetonitrile	Acetonitrilo
	Siero	Suero
	Diluente campione	Diluyente de Muestra
	Tampone diluizione	Tampón de dilución
	Antisiero	Antisuero
	Immunoassorbente	Inmunoadsorbente
	Diluente calibratore	Diluyente de calibrador
	Soluzione di ricostituzione	Solución de Reconstitución
	Polietilenglicole	Glicol Polietileno
	Soluzione di estrazione	Solución de extracción
	Soluzione di eluizione	Solución de elución
	Cartucce di silice bond elut	Cartuchos Bond Elut Silica
	Soluzione di pretrattamento	Solución de Pre-tratamiento
	Soluzione di neutralizzazione	Solución de Neutralización
	Tracer Buffer	Tampón de trazador
	Piastra di microtitolazione	Placa de microvaloración
	HRP Coniugato	HRP Conjugado
	HRP Coniugato	HRP Conjugado
	HRP Coniugato concentrato	HRP Conjugado concentrada
	HRP Coniugato concentrato	HRP Conjugado concentrada
	Buffer coniugato	Tampón de Conjugado
	Cromogena TMB concentrato	Cromógena TMB concentrada
	Soluzione cromogena TMB	Solución Cromógena TMB
	Tampone substrato	Tampón de sustrato
	Soluzione di arresto	Solución de Parada
	Incubazione con siero	Suero de Incubación
	Buffer	Tampón
	AP Coniugato	AP Conjugado
	Substrato PNPP	Sustrato PNPP
	Concentrato coniugato con biotina	Concentrado de conjugado de biotina
	Concentrato avidina HRP	Concentrado avidina-HRP
	Soluzione tampone per test	Tampón de ensayo
	Coniugato con biotina	Conjugado de biotina
	Anticorpo Specifico	Anticuerpo específico
	Streptavidina-HRP concentrata	Estreptavidina-HRP Concentrado
	Legame non-specifico	Unión no específica
	2° Anticorpo	Segundo anticuerpo
	Tampone Acidificante	Tampón de Acidificación

	<u>Símbolos utilizados</u>	<u>Använda symboler</u>
	Consulte instruções de utilização	Läs instruktionerna före användning
	Temperatura de conservação	Förvaringstemperatur
	Utilizar antes de	Används av
	Código de lote	Lotnummer
	Número de catálogo	Katalognummer
	Controlo	Kontroll
	Dispositivo médico de diagnóstico in vitro	In vitro diagnostiskt kit
	Fabricante	Tillverkare
	Conteúdo suficiente para <n> testes	Innehållet räcker till <n> prover
	Solução de lavagem concentrada	Tvättlösning, koncentrerad
	Calibrador zero	Nollkalibrerare
	Calibrador #	Kalibrator #
	Controlo #	Kontroll #
	Marcador	Radioisotop, antigen
	Marcador	Radioisotop, antikropp
	Marcador concentrada	Radioisotop, antigen koncentrerad
	Marcador concentrada	Radioisotop, antikropp koncentrerad
	Tubos	Rör
	Tampão de incubação	Inkuberingsbuffert
	Acetonitrilo	Acetonitril
	Soro	Serum
	Diluidor de espécimes	Spädningsbuffert för prover
	Tampão de diluição	Spädningsbuffert
	Anti-soro	Antiserum
	Imunoadsorvente	Immunoadsorberare
	Diluyente do calibrador	Kalibratordiluent
	Solução de Reconstituição	Rekonstitutionslösning
	Polietileno-glicol	Polyetylglykol
	Solução de Extração	Extraktionslösning
	Solução de Eluição	Elueringslösning
	Cartuchos de sílica Bond Elut	Silikonpatroner för elueringsbindning
	Solução de pré-tratamento	Förbehandlingslösning
	Solução de neutralização	Neutraliseringslösning
	Tampão Marcador	Tracerbuffert
	Placa de micro titulação	Microtiterplatta
	HRP Conjugação	HRP-konjugat
	HRP Conjugação	HRP-konjugat
	HRP Conjugação concentrada	HRP-konjugat-koncentrat
	HRP Conjugação concentrada	HRP-konjugat-koncentrat
	Conjuge o tampão	Konjugatbuffert
	Cromogénica TMB concentrada	Kromogeniskt TMB-koncentrat
	Solução Cromogénica TMB	Kromogenisk TMB-lösning
	Tampão de substrato	Substratbuffert
	Solução de Paragem	Stoplösning
	Soro de incubação	Inkubationsserum
	Tampão	Buffert
	AP Conjugação	AP-konjugat
	Substrato PNPP	Substrat-PNPP
	Concentrado conjugado de biotina	Biotinkonjugat koncentrat
	Concentrado HRP de avidina	Avidin HRP-koncentrat
	Tampão de ensaio	Provbuffert
	Conjugado de biotina	Biotinkonjugat
	Anticorpo específico	-
	Estreptavidina HRP concentrado	-
	Ligações não específicas	-
	Anticorpo secundário	-
	Tampão de acidificação	-

	<u>Επεξήγηση συμβόλων</u>	<u>Anvendte symboler</u>
	Συμβουλευτείτε τις οδηγίες χρήσης	Læs brugsvejledningen
	Θερμοκρασία αποθήκευσης	Opbevaringstemperatur
	Ημερομηνία λήξης	Anvend inden
	Αριθμός παρτίδας	Batchkode
	Αριθμός καταλόγου	Katalognummer
	Πρότυπο ελέγχου	Kontrol
	In Vitro Διαγνωστικό Ιατροτεχνολογικό προϊόν	Medicinsk udstyr til in vitro-diagnosticering
	Κατασκευαστής	Fabrikant
	Περιεχόμενο επαρκές για «n» εξετάσεις	Indeholder nok til <n> test
	Συμπυκνωμένο διάλυμα έκπλυσης	Koncentreret vaskeopløsning
	Μηδενικός βαθμονομητής	Nul-kalibrator
	Βαθμονομητής #	Kalibrator nr.
	Ορός ελέγχου #	Kontrol nr.
	Ιχνηθέτης	Markør
	Ιχνηθέτης	Markør
	Χρωμογόνος Ιχνηθέτης	Koncentreret markør
	Χρωμογόνος Ιχνηθέτης	Koncentreret markør
	Σοληνάρια	Tuber
	Ρυθμιστικό διάλυμα επώασης	Inkubationsbuffer
	Ακετονιτρίλιο	Acetonitril
	Ορός	Serum
	Διάλυμα αραίωσης δειγμάτων	Prøvediluent
	Ρυθμιστικό διάλυμα αραίωσης	Fortyndingsbuffer
	Αντιορός	Antiserum
	Ανοσοπροσροφητικό	Immonoadsorbent
	Αραιωτικό βαθμονομητών	Kalibratordiluent
	Διάλυμα ανασύστασης	Rekonstitueringsopløsning
	Πολυαιθυλενογλυκόλη	Polyetylenglykol
	Διάλυμα εκχύλισης	Ekstraktionsopløsning
	Διάλυμα έκλουσης	Elueringsopløsning
	Φύσιγγες πυριτίου Bond Elut	Patroner med bindingselueringssilica
	Διάλυμα προεπεξεργασίας	Forbehandlingsopløsning
	Διάλυμα εξουδετέρωσης	Neutraliseringsopløsning
	Ρυθμιστικό διάλυμα	Markørbuffer
	Πλάκα μικροτιτλοδότησης	Mikrotiterplade
	HRP Σύζευγμα	HRP-konjugat
	HRP Σύζευγμα	HRP-konjugat
	Χρωμογόνος HRP Σύζευγμα	HRP-konjugat-koncentreret
	Χρωμογόνος HRP Σύζευγμα	HRP-konjugat-koncentreret
	Ρυθμιστικό διάλυμα συζεύγματος	Konjugatbuffer
	Χρωμογόνος TMB	Kromogen TMB-koncentreret
	Διάλυμα χρωμογόνου TMB	Kromogen TMB-opløsning
	Ρυθμιστικό διάλυμα υποστρώματος	Substratbuffer
	Ανασχετικό αντιδραστήριο	Stopopløsning
	Ορός επώασης	Inkubationsserum
	Ρυθμιστικό διάλυμα	Buffer
	AP Σύζευγμα	AP-konjugat
	PNPP υποστρώματος	Substrat PNPP
	Συμπυκνωμένο αντιδραστήριο συζευγμένο με βιοτίνη	Biotin konjugat koncentrat
	Συμπυκνωμένο διάλυμα αβιδίνης-HRP	Avidin HRP koncentrat
	Ρυθμιστικό διάλυμα προσδιορισμού	Prøvebuffer
	αντιδραστήριο συζευγμένο με βιοτίνη	Biotin konjugat
	Ειδικό Αντίσωμα	-
	Συμπυκνωμένη στρεπταβιδίνη συνεξευγμένη με HRP	-
	μη-ειδική δέσμευση	-
	2ο Αντίσωμα	-
	Ρυθμιστικό Διάλυμα όξινο	-

	<u>Stosowane symbole</u>	<u>Használt szimbólumok</u>
	Przed zastosowaniem zapoznać się z instrukcją	Olvassa el a használati útmutatót
	Temperatura przechowywania	Tárolási hőmérséklet
	Zużyć przed	Lejáratí idő
	Kod serii	Gyártási kód
	Numer katalogowy	Katalógus szám
	Kontrola	Kontrol
	Urządzenie medyczne do diagnostyki in vitro	In vitro diagnosztikai eszköz
	Producent	Gyártó
	Zawartość wystarczająca do <n> testów	Tartalma <n> teszt elvégzésére elegendő
	Roztwór płuczący stężony	Mosó folyadék koncentrátum
	Kalibrator zerowy	Zero kalibrátor
	Kalibrator nr	Kalibrátor #
	Kontrola nr	Kontrol #
	Znacznik izotopowy	Nyomjelző izotóp
	Znacznik izotopowy	Nyomjelző izotóp
	Znacznik izotopowy stężony	Nyomjelző izotóp koncentrátum
	Znacznik izotopowy stężony	Nyomjelző izotóp koncentrátum
	Probówki	Csővek
	Wymagana inkubacja buforu	Inkubáló puffer
	Acetonitryl	Acetonitril
	Surowica	Szérum
	Rozcieńczalnik próbki	Mintahígító
	Bufor do rozcieńczania	Hígító puffer
	Antysurowica	Antiszérum
	Immunoabsorbent	Immunadszorbens
	Rozcieńczalnik kalibratora	Kalibrátor hígító
	Roztwór do rozcieńczania	Mintaelőkészítő oldat
	Glikol poli(oksy)etylenowy	Polietilén glikol
	Roztwór ekstrakcyjny	Extrakciós oldat
	Roztwór elucyjny	Eluáló oldat
	Kolumny krzemionkowe Bond Elut	Bond Elut Silica szilikagél patronok
	Roztwór do przygotowania wstępnego	Előkezelő oldat
	Roztwór neutralizujący	Semlegesítő oldat
	Bufor znacznika	Nyomjelző izotóp hígító puffer
	mikro płytki	Mikrotiter lemez
	Koniugat peroksydazy chrzanowej	HRP konjugátum
	Koniugat peroksydazy chrzanowej	HRP konjugátum
	Koncentrat koniugatu peroksydazy chrzanowej	HRP konjugátum koncentrátum
	Koncentrat koniugatu peroksydazy chrzanowej	HRP konjugátum koncentrátum
	Bufor do koniugacji	Konjugátum puffer
	Koncentrat chromogenu TMB (czterometylobenzodyny)	Kromogén TMB koncentrátum
	Roztwór chromogenu TMB (czterometylobenzodyny)	Kromogén TMB oldat
	Bufor substratu	Szubsztrát puffer
	Roztwór zatrzymujący reakcję	Stop oldat
	Wymagana inkubacja surowicy	Inkubációs szérum
	Bufor	Puffer
	Koniugat AP (fosfatazy alkalicznej)	AP konjugátum
	p-nitrofenylofosforan substratowy	Szubsztrát PNPP
	Koncentrat koniugatu biotyny	Biotin konjugátum koncentrátum
	Koncentrat peroksydazy chrzanowej z awidyną	Avidin HRP koncentrátum
	Bufor do oznaczania	Vizsgálati puffer
	Koniugatu biotyny	Biotin konjugátum
	Przeciwciało swoiste	Specifikus ellenanyag
	Koncentrat streptawidyny HRP	Sztreptawidin HRP koncentrátum
	Wiązanie nieswoiste	Nem-specifikus kötődés
	Drugie przeciwciało	Másodlagos ellenanyag
	Bufor zakwaszający	Savas puffer

	<u>Използвани символи</u>
	Вижте инструкцията за работа
	Температура на съхранение
	Използвайте с
LOT	Партиден код
REF	Каталожен номер
CONTROL	Контрол
IVD	Ин витро диагностично медицинско изделие
	Производител
	Съдържание достатъчно за <n> теста
WASH SOLN CONC	Концентриран измиващ разтвор
CAL 0	Нулев калибратор
CAL N	Калибратор #
CONTROL N	Контрол #
Ag 125I	Трейсър
Ab 125I	Трейсър
Ag 125I CONC	Концентриран маркер
Ab 125I CONC	Концентриран маркер
	Епруветки
INC BUF	Инкубационен буфер
ACETONITRILE	Ацетонитрил
SERUM	Серум
DIL SPE	Разредител за пробите
DIL BUF	Буфер за разреждане
ANTISERUM	Антисерум
IMMUNOABSORBENT	Имуноабсорбент
DIL CAL	Разредител за калибратора
REC SOLN	Пресъздаващ разтвор
PEG	Полиетилен гликол
EXTR SOLN	Екстрактов разтвор
ELU SOLN	Разтвор за елюиране
GEL	Силикагелни пълнители
PRE SOLN	Пред-лечебен разтвор
NEUTR SOLN	Неутрализиращ разтвор
TRACEUR BUF	Маркерен буфер
	Микротитърна пластина
Ab HRP	HRP конюгат / Конюгат на хрянова пероксидаза
Ag HRP	HRP конюгат / Конюгат на хрянова пероксидаза
Ab HRP CONC	HRP конюгиран концентрат
Ag HRP CONC	HRP конюгиран концентрат
CONJ BUF	Буфер за конюгата
CHROM TMB CONC	Хромогенен ТМВ концентрат
CHROM TMB	Хромогенен ТМВ разтвор
SUB BUF	Субстратен буфер
STOP SOLN	Стоп разтвор
INC SER	Инкубационен серум
BUF	Буфер
Ab AP	AP конюгат / конюгат на алкална фосфатаза
SUB PNPP	Субстрат PNPP / пара нитрофенил фосфат
BIOT CONJ CONC	Биотин конюгиран концентрат
AVID HRP CONC	Авидин HRP концентрат
ASS BUF	Буфер за пробите
Ab BIOT	Биотин конюгат
Ab	специфично антитяло
SAV HRP CONC	стрептавидин HRP концентрат
NSB	не специфично свързване
2nd Ab	второ антитяло
ACID BUF	киселинизиращ буфер