EXTERNAL REFERENCES

ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES

Last update: February 2025

Publications / References:

PERFORMANCE EVALUATIONS

1)Kauter J. *et al*. (2023). **Detection of *Toxoplasma gondii*-specific antibodies in pigs using an oral fluid-based commercial ELISA: Advantages and limitations**. International journal for parasitology, 53(9), 523-530.	• The objective of this study was to assess whether *T. gondii* infections in **pigs** could be diagnosed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species adapted for **oral fluids** (OF) samples (OF-ELISA). Routine serology (with another commercial test, the ELISA PrioCHECK Porcine Toxoplasma Ab Kit) and OF-immunoblot (IB) were used as standards for the comparison. Serial OF samples from sows (n = 8) and fatteners (n = 3) experimentally inoculated with *T. gondii* oocysts, individual field samples from potentially exposed sows (n = 9), and pooled OF samples from potentially exposed group-housed fatteners were tested (n = 195 pig groups, including 2248 animals). • Test Modification applied with the ID Screen® kit: OF samples were tested under the following conditions: sample dilution 1:2 in sample buffer, sample incubation at 4°C overnight, and conjugate dilution 1:2 in conjugate buffer. • *Results*: <u>for individual animals</u>, relative diagnostic specificity was 97.3% and relative diagnostic sensitivity was 78.8% (using as reference standard either Immunoblot or serum ELISA). <u>in experimentally infected animals</u>, positive results were observed from 1.5 weeks post-inoculation (pi) until the end of the experimental setup (8 to 30 weeks pi) <u>in potentially exposed individual animals</u>, OF- and serum-ELISA results showed 100% agreement. <u>in group-housed fatteners</u>, antibodies could be reliably detected by OF-ELISA in groups where at least 25% of the animals were seropositive. ***This OF-ELISA, based on a commercially available serum-ELISA, may represent an interesting noninvasive screening tool for detecting pig groups with a high exposure to T. gondii at the farm level*. (sic)**			**Particular matrix**	**Modification of the protocol**	

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2)López-Ureña N.M. *et al*. (2023). **A comparative study of serological tests used in the diagnosis of *Toxoplasma gondii* infection in small ruminants evidenced the importance of cross-reactions for harmonizing diagnostic performance**. Research in Veterinary Science, 165, 105052.	• Comparative study of four commercial ELISA kits (including the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species), using sera from **sheep** experimentally (n=124) and naturally infected (n=239) with *T. gondii*. ROC analyses and agreement tests were performed. • *Results*: The ID Screen® kit achieved the highest diagnostic performance, with 100% agreement between serological techniques before and after the ROC analyses and cutoff value readjustment.	**Comparison with competitors**			**Modification of cutoff**	
3)Liyanage K.L.D.T.D. *et al*. (2021). **Descriptive comparison of ELISAs for the detection of *Toxoplasma gondii* antibodies in animals: A systematic review**. Pathogens, 10(5), 605.	• This study is a systemic review to descriptively compare 6 different ELISA kits (including the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species) to detect anti-*Toxoplasma gondii* antibodies across **different animal species**. 57 studies were analyzed. • *Results*: out of the 5 studies that used **milk and meat juice samples**, the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species achieved more than 97% sensitivity and specificity, and excellent agreement (Kappa value of 0.949) between results obtained on milk and serum. for milk: sensitivity and specificity values ranged from 88.7 to 97.55% and 97.42 to 97.83%, respectively for meat juice: sensitivity and specificity values ranged from 3.6 to 96.7% and 83.9 to 100%, respectively the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species reported better overall performance than other commercial kits using meat juice samples the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species also presented an excellent agreement with MAT (kappa value of 0.949 and 0.83, respectively) for milk and meat juice samples. ***Among commercial kits, the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES appeared to be effective due to its better performance and utility across multiple species as well as the possibility of testing different types of samples (serum, milk, or meat juice). It may subsequently be useful for detecting T. gondii antibodies in wild ruminants, porcine species, canids, and felids.*** **(sic)**	**Comparison with competitors**	**Correlation with other methods**	**Particular matrix**		

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4)Basso W. *et al.* (2020). ***Toxoplasma gondii* and *Neospora caninum* infections in South American camelids in Switzerland and assessment of serological tests for diagnosis**. Parasites & vectors, 13(1), 1-18.	• Sera from 374 **alpacas** and 197 **llamas** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species and immunoblot, with optimized cut-offs. • *Results*: using re-adjusted cut-off value based on ROC analysis considering the immunoblot results (S/P = 36.2%), the seroprevalence using the ID SCREEN® ELISA was 83.2% for the alpacas and 84.8% for the llamas. **The ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species almost perfectly agreed with immunoblot results (considering the optimized cut-off value, kappa = 0.925).**		**Correlation with other techniques**			
5)Sharma R. *et al.* (2019). **Risk factors and prevalence of antibodies for *Toxoplasma gondii* in diaphragmatic fluid in wolverines (*Gulo gulo*) from the Northwest Territories, Canada**. Food and Waterborne Parasitology, 15, e00056.	• **Thoracic fluids collected on filter paper strips** and **heart fluids** from 68 **wolverine** carcasses were analyzed using MAT, IFAT, and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. The 3 serological methods were compared with MC-qPCR detection in the brain and heart in a pilot study with 9 animals. • *Results*: using MC-qPCR as the determinant of infection status, the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species relative sensitivity, relative specificity, positive predictive value, negative predictive value, and accuracy were respectively 94%, 100%, 100%, 98%, and 99%, with better performance than MAT. • the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species showed excellent agreement (kappa value = 0.96) with MC-qPCR. **Heart fluids could be used to detect anti-*Toxoplasma gondii* antibodies, but filter eluates could give false negatives.**		**Correlation with other methods**	**Particular matrix**		
6)Felin E. *et al*. (2017). **Comparison of commercial ELISA tests for the detection of *Toxoplasma antibodies* in the meat juice of naturally infected pigs**. *Veterinary parasitology*, *238*, 30-34.	• 4 commercial ELISA tests for the detection of anti-*Toxoplasma* antibodies in **meat juice from pigs** (including the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species) were compared between each other and with a commercial Modified Agglutination Test (MAT) as a reference. 90 meat juice samples from diaphragm tissue were selected using a commercial ELISA. • *Results*: using MAT as reference test, the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES showed: 100% specificity, 78.6% sensitivity, 93.3% accuracy, kappa value = 0.84 (high agreement).	**Comparison with competitors**	**Correlation with other methods**	**Particular matrix**		

7)Paştiu A.I. *et al* (2015). **Comparative assessment of *Toxoplasma gondii* infection prevalence in Romania using 3 serological methods**. Bulletin UASVM Veterinary Medicine, 72, 1.	• This study evaluated 3 serological tests used for anti-*T. gondii* antibodies detection in **horses**: the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species and two *'in house'* methods (IFAT and MAT). • *Results*: the best agreement was observed between ELISA and MAT (kappa value = 0.77). The ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES has the highest sensitivity (96.8%) and the highest specificity (96.1%), followed by MAT (90.3% and 94.1%, respectively), both tests proved better diagnostic potency compared with IFAT. The highest seroprevalence was obtained by ELISA (39%), followed by MAT (37.8%) and IFAT (34.1%). **The ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES presented the highest diagnostic efficiency.**		Correlation with other methods	Epidemiological study		
8)Gebremedhin E.Z. *et al.* (2013). **Comparison between enzyme linked immunosorbent assay (ELISA) and modified agglutination test (MAT) for detection of *Toxoplasma gondii* infection in sheep and goats slaughtered in an export abattoir at Debre-Zeit, Ethiopia**. *BMC veterinary research*, *9*(1), 1.	• A comparative study on **cardiac blood samples** of **sheep** (n=104) and **goats** (n=138) was performed using Modified Agglutination Test (MAT) and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: -seropositivity for MAT and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species was 27.7% and 9.9% respectively, with agreement of kappa = 0.42. -overall sensitivity, specificity, and positive and negative predictive values of the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species were 34.3%, 99.4%, 95.8%, and 79.8% respectively. -all ELISA-positive samples were also positive by MAT. ***The high specificity and positive predictive value of the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species indicate its potential as diagnostic tests, particularly in areas with a high prevalence of infection.* (sic)**		Correlation with other methods	Particular matrix		
9)Györke A. *et al* (2011). ***Toxoplasma gondii* in Romanian household cats: evaluation of serological tests, epidemiology and risk factors**. *Preventive veterinary medicine*, *102*(4), 321-328.	• 6 serological tests (the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species, 2 in-house ELISAs, Immunocomb, IFAT, and MAT) were evaluated on 243 sera collected from household **cats.** • *Results*: the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species performed best with a Youden Index between 0.933 and 0.945, a sensitivity between 95.7 and 97.1%, and a specificity between 97.3 and 97.6%. ***The ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES has high sensitivity and specificity for the detection of anti-Toxoplasma gondii antibodies in cats* (sic).**		Correlation with other methods			

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EPIDEMIOLOGICAL STUDIES

SHEEP AND GOATS

10)Dahmane A. *et al.* (2024). **Seroprevalence Assessment and Risk Factor Analysis of *Toxoplasma gondii* Infection in Goats from Northeastern Algeria**. Animals, 14, 883.	• 460 **goat** sera from 72 herds were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results:* overall prevalence was 53.26% at herd level, prevalence was 94.4%.
11)Condoleo R. *et al*. (2023). ***Toxoplasma gondii* in sheep: Serological occurrence at slaughterhouse level in Italy and environmental risk factors**. Front. Vet. Sci. 10:1057277.	• 405 **sheep** sera were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 53.8%.
12)Elaadli H. *et al*. (2023). **Prevalence and associated risk factors of *Toxoplasma gondii* infection in sheep and aborted women in Egypt**. Iraqi Journal of Veterinary Sciences, 37(2), 437-445.	• 174 **sheep** sera were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 62.6%.
13)Tarusikirwa D.F. *et al.* (2023). **Seroprevalence and assessment of public awareness of *Brucella spp.*, *Toxoplasma gondii* and *Chlamydia abortus* in small ruminants from selected smallholder commercial farms of Zimbabwe**. PLoS ONE 18(6): e0287902.	• Sera from 335 **goats** and 63 **sheep** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 6.8%.
14)Aboelwafa S.S. *et al.* (2022). **Seroprevalence of *Toxoplasma gondii* and *Neospora caninum* in small ruminants in Luxor, Egypt**. Adv. Anim. Vet. Sci. 10(2): 412-420.	• 92 **sheep** and 92 **goat** sera were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in goats: 34.8% in sheep: 40.2%.

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15)Alamerew E. A. *et al.* (2022). **Apparent prevalence of brucellosis, Q-fever and toxoplasmosis in aborted goat's at North Shoa, Ethiopia**. EUREKA: Life Sciences, (5), 28-37.	• 35 serum samples collected from aborted **goats** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 8.6%.					
16)Basso W. *et al*. (2022). ***Toxoplasma gondii* and *Neospora caninum* infections in sheep and goats in Switzerland: Seroprevalence and occurrence in aborted foetuses**. Food and waterborne parasitology, 28, e00176.	• 653 **sheep** (from 143 farms) sera and 748 **goats** (from 164 farms) sera were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. Inconclusive results were defined by immunoblot. • *Results*: seroprevalence was: in sheep: at the animal level: 65.5%; considering immunoblot results, adjusted seroprevalence was 66.3% at the farm level: 90.9%; considering immunoblot results, seroprevalence remained unchanged in goats: at the animal level: 50.1%; considering immunoblot results, adjusted seroprevalence was 50.5.% at the farm level: 81.1%; considering immunoblot results, seroprevalence remained unchanged.		Correlation with other methods			
17)Clune T. *et al.* (2022). ***Toxoplasma gondii* is not an important contributor to poor reproductive performance of primiparous ewes from southern Australia: a prospective cohort study**. BMC veterinary research, 18(1), 109.	• Seroprevalence study on primiparous **ewes** (n=1279) using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 1.1%.					
18)Fereig R.M. *et al.* (2022). **Seroprevalence of Specific Antibodies to *Toxoplasma gondii*, *Neospora caninum*, and *Brucella spp*. in Sheep and Goats in Egypt**. *Animals*, *12*(23), 3327.	• **Sheep** and **goat** sera (n=360) were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 46.1%.					
19)Kareem S. *et al.* (2022). **Serological detection of *Toxoplasma gondii* in some intermediate hosts (sheep and goats) in Thi-Qar province, Southern Iraq**. Journal of Education for Pure Science-University of Thi-Qar, 12(2), 234-239.	• 144 sera from **sheep** and 136 from **goats** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in goats: 50.69% in sheep: 44.85%.					

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20)Alemnew E. *et al*. (2021). **Clinical abortion and serological investigation of *Brucella melitensis*, *Coxiella burnetii* and *Toxoplasma gondii* in goats in Ataye boer nucleus site North Shewa Zone, Ethiopia**. *Agric Vet Sci*, *5*(2), 55-65.	• Seroprevalence study on **goats** (n= 35) was performed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 8.6%.					
21)Almeida D. *et al*. (2021). **A 2-Year Longitudinal Seroepidemiological Evaluation of *Toxoplasma gondii* Antibodies in a Cohort of Autochthonous Sheep from Central Portugal**. Pathogens 2021, 10, 40.	• A 2-year longitudinal serological screening was performed on **sheep** (1668 sera year 1 and 168 sera year 2) using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: an increase in seroprevalence was observed (57.7% versus 69.1%, from year 1 and year 2, respectively).					
22)Aroussi A. *et al.* (2021). **Estimation of *Toxoplasma gondii* seroprevalence in sheep in Sidi Bel Abbes, Algeria**. *Open Veterinary Science*, *2*(1), 65-71.	• 269 **sheep** sera were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. The study simultaneously assessed the recommended cut-off and bootstrap statistical model to estimate the optimal cut-off value. • *Results*: seroprevalence was 34.2% using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species cut-off, and 50.5% according to an adjusted cut-off value.				Modification of cutoff	
23)Chiang S. H. *et al*. (2020). **Epidemiological survey of *Toxoplasma gondii* and *Neospora caninum* infections in dairy goats in Central-Southern Taiwan**. Journal of Veterinary Medical Science, 82(10), 1537-1544.	• 630 caprine sera collected from 42 dairy **goat** farms were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: at farm-level: 88.1% at individual-level: 32.22%.					
24)Gazzonis A.L. *et al.* (2020). ***Toxoplasma gondii* infection in meat-producing small ruminants: Meat juice serology and genotyping**. Parasitology international, 76, 102060.	• **Meat juice** samples from 227 **sheep** and 51 **goats** were analyzed with the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: prevalence was: in sheep: 28.6% In goats: 27.5%			**Particular matrix**		

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25)Gazzonis A.L. *et al*. (2019). ***Toxoplasma gondii* in naturally infected goats: Monitoring of specific IgG levels in serum and milk during lactation and parasitic DNA detection in milk**. Preventive veterinary medicine, 170, 104738.	• A longitudinal study in a *Toxoplasma gondii* naturally infected dairy **goat** farm (n=30) was performed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species to evaluate the variation of anti-*Toxoplasma gondii* antibodies in **blood and milk** during lactation. • *Results*: -seroprevalence was 63.3% -a high agreement was obtained between serum and milk results, particularly between the 15th and the 60th of lactation. ***Milk could be considered as a valid alternative sample to blood for monitoring Toxoplasma gondii infection in goat herds.* (sic)**			Particular matrix		
26)Tonouhewa A.B.N. *et al*. (2019). **A serological survey of *Toxoplasma gondii* infection in sheep and goat from Benin, West-Africa**. *Journal of parasitic diseases*, *43*(3), 343-349.	• Serum samples from 215 **sheep** and 153 **goats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: in sheep: 1.4% in goats: 53.6%.					
27)Gharekhani J. *et al*. (2018). **Seroprevalence and risk factors of *Neospora caninum* and *Toxoplasma gondii* in small ruminants in Southwest of Iran**. Archives of Razi Institute, 73(4), 305-310.	• 550 **sheep** and 185 **goat** serum samples were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in sheep: 10.8% in goats: 20%.					
28)Subedi S. *et al.* (2018). **Sero-prevalence of *Toxoplasma gondii* in sheep in different geographical regions of Nepal**. Veterinary and Animal Science, 5, 7-9.	• Blood samples from 235 **sheep** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 36.17%.					
29)Villagra-Blanco R. *et al*. (2018). **Seroprevalence and factors associated with *Toxoplasma gondii-*, *Neospora caninum*-and *Coxiella burnetii*-infections in dairy goat flocks from Costa Rica**. Veterinary Parasitology: Regional Studies and Reports, 14, 79-84.	• 391 **goat** serum samples, from 13 dairy flocks, were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: at animal level: 62.1% at herd-level: 100%.					

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30)Rodriguez-Ponce E. *et al.* (2017). **Serological survey of antibodies to *Toxoplasma gondii* and *Neospora caninium* in goat population in Canary Islands (Macaronesia Archipelago, Spain)**. *Small Ruminant Research*, *147*, 73-76.	• 552 **goat** sera were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 7.8%.					
31)Ahmed H. *et al.* (2016). **Seroprevalence and spatial distribution of toxoplasmosis in sheep and goats in North-Eastern Region of Pakistan**. *The Korean journal of parasitology*, *54*(4), 439.	• Serum samples from 470 **sheep** and 530 **goats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: in sheep: 26.2% in goats: 42.8%.					
32)Sharma R.N. *et al* (2015). **Seroprevalence of *Toxoplasma gondii* in sheep and goats in Grenada, West Indies**. International Journal of Current Research and Academic Review, 3, 262-267.	• 138 sera samples from **sheep** and 138 serum samples from **goats** previously tested by Modified Agglutination Test (MAT) were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: -using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species: in sheep: 71% in goats: 49.3% -using MAT: in sheep: 44.1% in goats: 42.8%.			**Correlation with other methods**		

BOVINE

33)Metwally S. *et al.* (2023). **Seroprevalence and risk factors analysis of *Neospora caninum* and *Toxoplasma gondii* in cattle of Beheira, Egypt**. Front. Vet. Sci. 10:1122092.	• 358 plasma samples collected from **dairy and beef farms** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was 19%.					

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34)Liu Y. *et al.* (2022). ***Toxoplasma gondii* Antibodies in Raw Milk and Sera of Cows in China**. Pathogens, 11(10), 1079.	• **Raw milk and serum samples** from 894 randomly selected **cows** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: In milk samples: 6.38% in serum samples: 7.16% a high correlation between the S/P% values acquired in the serum and milk samples was shown (Spearman's coefficient = 0.84).			Particular matrix		
35)Ciuca L. *et al.* (2020). **Seroprevalence and clinical outcomes of *Neospora caninum, Toxoplasma gondii* and *Besnoitia besnoiti* infections in water buffaloes (Bubalus bubalis)**. Animals, 10(3), 532.	• 124 sera samples from **water buffaloes** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 13.7%.					
36)Gazzonis A.L. *et al.* (2020). ***Toxoplasma gondii* seroprevalence in beef cattle raised in Italy: A multicenter study**. Parasitology Research, 119, 3893-3898.	• 1444 serum samples from 57 **beef cattle** herds were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: at individual level: 10.2%, at herd-level: 64%.					
37)Oh J. *et al.* (2016). **Detection of antibodies against *Toxoplasma gondii* in cattle raised in Gyeongbuk Province, Korea**. Journal of food protection, 79(5), 821-824.	• 568 serum samples from **cattle** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 0.5%.					

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LARGE AND SMALL RUMINANTS

38)Fereig R. M. *et al*. (2022). **Prevalence of *Neospora caninum* and *Toxoplasma gondii* antibodies and DNA in raw milk of various ruminants in Egypt**. Pathogens, 11(11), 1305.	• This study investigated the prevalence of anti-*Toxoplasma gondii* antibodies in **bulk and individual raw milk** samples from cattle, buffaloes, sheep, and goats, using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: from13 tested bulk milk samples representing 13 different farms, 2 bulks (from a sheep and a goat smallholder farm, respectively) were found positive. in the individual samples, seroprevalence was: in goats: 81.8% in sheep: 66.7% in cattle: 2.4% in buffaloes: 0%.			Particular matrix		
39)Yaseen A.N. *et al.* (2022). **Using of Serological and Molecular Technique for *Toxoplasma Gondii* Diagnosis in Goat and Cow in Some Regions of Baghdad Governorate**. HIV Nursing, 22(2), 1466-1472.	• Serum samples collected from 50 **cows** and 104 **goats** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in cows: 18% in goats: 60%.					
40)Pepe P. *et al* (2021). **Towards an integrated approach for monitoring Toxoplasmosis in Southern Italy**. Animals, 11(7), 1949.	• A serological study was performed on a total of 1127 animals from 104 livestock farms (29 sheep, 26 goat, 25 cattle, and 24 water buffalo farms) using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. In each farm whose livestock were serologically positive for *Toxoplasma gondii*, **blood samples of cats** (n=304) present were analyzed. Moreover sera and **meat juices (myocardium and diaphragm samples)** from slaughtered animals (50 **sheep**, 50 **goats**, 45 **cattle**, 48 **water buffaloes**, and 218 **pigs**) were analyzed. • *Results*: seroprevalence in livestock farms was 37.8% seroprevalence in cats: 98% seroprevalence from serological analysis of blood, myocardium, and diaphragm tissue samples from slaughtered animals was: 96% in sheep 98% in goats 17.8%, in cattle 8.3% in water buffaloes 5.5% in pigs.			Particular matrix		

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	The highest levels of agreement from good to very good, were obtained between serum and meat juice from myocardium for most of the animal species analyzed (sheep, goats, water buffaloes and pigs). A better agreement value was found between serum and diaphragm only in cattle.

SWINE

41)Chepyatich D. *et al*. (2023). **Seroprevalence of *Toxoplasma gondii* in Slaughtered Pigs in Kiambu, Kenya**. Zoonotic Dis., 3, 301–306.	• 446 blood samples collected from **slaughtered pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 34.53%.
42)Fereig, R.M. *et al*. (2023). **Seroprevalence of *Toxoplasma gondii*, *Neospora caninum* and *Trichinella spp*. in Pigs from Cairo, Egypt**. Vet. Sci., 10, 675.	• 332 blood samples collected from **slaughtered pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 45.8%.
43)Dahourou L.D. *et al*. (2020). **Serological evidence and factors associated with porcine toxoplasmosis in three villages of Fara's division in Burkina Faso**. *International Journal of Biological and Chemical Sciences*, *14*(6), 2172-2180.	• 182 serum samples from **pigs** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 16.5%.
44)Tonouhewa A.B.N. et al. (2020). ***Toxoplasma gondii* infections in pigs from south Benin and assessment of breeders'knowledge about toxoplasmosis**. Bulgarian Journal of Veterinary Medicine, 23(2).	• 184 **pig** serum samples were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 23%.

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45)Tialla D. *et al*. (2019). **Seroprevalence and factors associated with bovine and swine toxoplasmosis in Bobo-Dioulasso, Burkina Faso**. Veterinary World, 12(10): 1519-1523.	• Serum samples collected from 600 **cattle** and 600 **pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was -at herd level: in porcine: 92.5% in bovine:75% -at individual level: in porcine: 49.2% in bovine: 29%.					
46)Pablos-Tanarro A. *et al*. (2018). **Seroprevalence of *Toxoplasma gondii* in Iberian pig sows**. *Parasitology research*, *117*(5), 1419-1424.	• 2492 serum samples from **sows** were analyzed by the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species and a commercial direct agglutination test (DAT). • *Results*: -anti-*Toxoplasma gondii* antibodies were detected in 9.5% of tested animals by at least one of the two serological assays. -seroprevalence was: 5.8% using the ID SCREEN® TOXOPLASMOSIS Indirect: 8.9% using DAT -level of agreement kappa = 0.68.		Correlation with other tmethods			
47)Obijiaku I. N. *et al*. (2017). **Seroprevalence of *Toxoplasma gondii* infection in slaughtered pigs in Makurdi, Nigeria**. *Sokoto Journal of Veterinary Sciences*, *15*(3), 91-94.	• 181 serum samples from **pigs** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 4.4%.					
48)Xhafa A. *et al*. (2017). **Seroprevalence of *Toxoplasma gondii* infection in pigs in extensive breeding from Saranda district of Albania**. Annals of the University of Craiova-Agriculture, Montanology, Cadastre Series, 46(1), 304-307.	• 92 serum samples from **slaughtered pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was 17.4%.					
49)Bamba S. *et al*. (2016). **Seroprevalence of *Toxoplasma gondii* and direct genotyping using minisequencing in free-range pigs in Burkina Faso**. International journal of food microbiology, 230, 10-15.	• **Meat juices** from 300 **pig diaphragms** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: prevalence was 29%.			Particular matrix		
50)Bacci C. *et al*. (2015). **Detection of *Toxoplasma gondii* in free-range, organic pigs in Italy using serological and molecular methods**. *International journal of food microbiology*, *202*, 54-56.	• **Meat juices from myocardial tissue of pigs** (n=21) were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: prevalence was 95.2% (20/21 samples were found positive); only one sample presented a S/P% value that was considered doubtful.			Particular matrix		

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51)Koirala P. *et al*. (2015). **Prevalence of *Toxoplasma gondii* in Different Species of Farm Animals in Nepal**. Nepalese Vet. J, 32, 13-19.	• Serum samples from 1812 **cattle**, 703 **goats**, 83 **sheep**, and 94 **pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was in cattle: 12.14% in goats: 19.2% in sheep: 25.3% in pigs: 19.15%.					
52)Onyiche T.E. *et al*. (2013). **Seroprevalence of anti-*Toxoplasma gondii* antibodies in cattle and pigs in Ibadan, Nigeria**. Journal of Parasitic Diseases, 39, 309-314.	• Sera from 210 **cattle** and 302 **pigs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in cattle: 13.91% in pigs: 29.14%.					

EQUINE

53)Pala S. *et al*. (2024). **Prevalence and factors associated with *Leishmania spp*. and *Toxoplasma gondii* infections in apparently healthy horses in Eastern Spain**. Research in Veterinary Science, 105236.	• Serum samples from 166 **horses** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 16.27%.					
54)Marzok M. *et al*. (2023). **Seroprevalence and Risk Factors for *Toxoplasma gondii* Infection in Horses**. Vet. Sci. 2023, 10, 237.	• 420 **horse** blood samples were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 16.2%.					
55)Chen L. *et al.* (2021). **Detection of Specific IgG Antibodies Against *Toxoplasma gondii* in the Serum and Milk of Domestic Donkeys During Lactation in China: A Potential Public Health Concern**. Front. Cell. Infect. Microbiol. 11:760400.	• A cross-sectional study evaluated the variation of the anti-*T. gondii* antibodies in the **blood** and **milk** of 418 domestic **donkeys** during lactation using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: in serum samples: 11.72% in milk samples: 9.81% with a very high consistency between the serum and milk (Spearman's coefficient = 0.858).			**Particular matrix**		

56)Ouslimani S. F. *et al.* (2019). **Seroepidemiological study of the exposure to *Toxoplasma gondii* among horses in Algeria and analysis of risk factors**. Veterinary World, 12(12), 2007.	• 736 blood samples collected from **horses** were analyzed using IFAT as reference method, the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species, and latex agglutination test (LAT). • *Results: seroprevalence was:* by IFAT: 24.18% by LAT18.07% with the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species: 43.07% agreement between the ID SCREEN® ELISA and IFAT: 81%. agreement between the ID SCREEN® ELISA and LAT: 75%.		Correlation with other methods			
57)Lee S.H. *et al.* (2014). **Evidence of *Toxoplasma gondii* exposure among horses in Korea.** Journal of Veterinary Medical Science, 76(12), 1663-1665.	• 816 blood samples collected from **horses** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 2.9%.					

CAMELIDS

58)Selim A. *et al.* (2023). **Seroprevalence and Potential Risk Factors of *Toxoplasma gondii* in Dromedary Camels**. Agriculture 13, 129.	• Sera from 390 **dromedary camels** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 46.9%.					
59)Fereig R.M. *et al.* (2022). **Seroprevalence of *Toxoplasma gondii* and *Neospora caninum* in camels recently imported to Egypt from Sudan and a global systematic review**. Front. Cell. Infect. Microbiol. 12:1042279.	• Sera from 460 **camels** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 25.7%.					
60)Abdallah M. C. *et al.* (2020). **First report of *Toxoplasma gondii* infection and associated risk factors in the dromedary camel (Camelus dromedarius) population in south East Algeria**. Veterinary Parasitology: Regional Studies and Reports, 22, 100475.	• A cross-sectional study was performed on 320 **dromedaries** using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 15%.					

61)Bártová E. *et al.* (2017). **Seroprevalence of *Neospora caninum* and *Toxoplasma gondii* in exotic ruminants and camelids in the Czech Republic**. Parasitology Research, 116(7), 1925-1929.	• Sera from farmed captive exotic ruminants including Bovidae (**barbary sheep, bezoar goat, common eland, American bison, water buffalo, and yak)** and Camelidae (**Bactrian camel, guanaco, llama, and alpaca**) were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species and IFAT. • *Results*: seroprevalence was 31% with IFAT 52% with the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species.		Correlation with other tmethods			

CATS AND DOGS

62)Bellatreche A.Y. *et al.* (2022). **Comparison of a Commercial Enzyme-Linked Immunosorbent Assay (ELISA) with the Modified Agglutination Test (MAT) for the Detection of Antibodies against *Toxoplasma gondii* in a Cohort of Hunting Dogs**. Animals, 12, 2813.	• 91 blood samples collected from **hunting dogs** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species and Modified Agglutination Test (MAT). • *Results*: prevalence with MAT: 37.4% prevalence with ID SCREEN® TOXOPLASMOSIS Indirect Multi-species: 36.8%.		Correlation with othermethods			
63)Hamidullah *et al*. (2022). **Screening of Toxoplasmosis in Owned and Stray Dogs of District Faisalabad, Pakistan through Latex Agglutination and Indirect ELISA**. Pathogens, 11, 1307.	• A commercially available Latex Agglutination Test (LAT) kit was used to screen serum samples (139 **stray** and 150 **owned dogs**), followed by confirmation through the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: -prevalence was: for LAT: 22.5% for ELISA: 21.8%. 287 out of 289 results obtained on dog samples tested using LAT were confirmed with the kit ID Screen®.		Correlation with other techniques			
64)Salama D.B. *et al.* (2022). ***Toxoplasma gondii* and *Neospora caninum* Antibodies in Dogs and Cats from Egypt and Risk Factor Analysis**. Pathogens, 11, 1464.	• Blood samples from 172 **dogs** and 51 **cats** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence in dogs: 23.3% prevalence in cats: 9.8%.					
65)Xia N. *et al.* (2022). **Seroprevalence and risk factors of *Toxoplasma gondii* in urban cats from China**. BMC Veterinary Research, 18(1), 331.	• 1531 serum samples from **urban pet cats and stray cats** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence in urban pet cats; 4.2% prevalence in stray cats: 20.9%.					

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66)Attipa C. *et al*. (2021). **Seroprevalence of Toxoplasma gondii in Cats from Cyprus**. Pathogens, 10(7), 882.	• Sera from 155 **cats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 32.3%.					
67)Mawlood H. H. *et al.* (2021). **Seroprevalence of *Toxoplasma gondii* among stray cats using different serological techniques in Erbil City: Kurdistan Region/Iraq**. International Journal of Research in Medical Sciences, 9(5), 1258.	• Serum samples from 100 **stray cats** were tested using Modified Agglutination Test (MAT), Latex Agglutination Test (LAT), and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: by MAT: 22%, by ELISA: 20%, by LAT:11%.		Correlation with other methods			
68)Fábrega L. *et al*. (2020). **Frequency of *Toxoplasma gondii* and risk factors associated with the infection in stray dogs and cats of Panama**. *Microorganisms*, *8*(6), 927.	• Sera from 319 **feral dogs** and 351 **feral cats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. A commercial immunochromatography assay to detect anti-*Toxoplasma gondii* IgM antibodies was used moreover on feline samples. • *Results*: seroprevalence was: -using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species: 25.7% for dogs 21.93% for cats. -using immunochromatographic assay (detection of IgM) 2.82% for dogs 7.69% for cats.		Correlation with other methods			
69)Tan L.P. *et al* (2020). **Prevalence of *Toxoplasma gondii* in pet and stray cats in Klang Valley, Malaysia**. *Tropical biomedicine*, *37*(3), 542-550.	• Sera from 198 **pet** and **stray cats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 5.5%.					
70)Rengifo-Herrera C. *et al* (2017). **Seroprevalence of *Toxoplasma gondii* in domestic pets from metropolitan regions of Panama**. *Parasite*, *24*.	• Sera from 120 cats and 456 dogs were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: overall seroprevalence was 30.73% (32.23% for dogs and 25% for cats).					
71)Sharma R.N. *et al*. (2014). **Prevalence of *Toxoplasma gondii* antibodies in stray and owned dogs of Grenada, West Indies**. Veterinary World 7(9): 661-664.	• Serum samples from 625 **dogs** (368 **stray** and 257 **owned** dogs) were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results:* prevalence was: in stray dogs: 33.4% in owned dogs: 25%.					

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RABBITS AND RODENTS

72)Chalo S.L. *et al.* (2023). **Seroprevalence and molecular detection of *Toxoplasma gondii* infections in rodents and cats in Mbeya district, Tanzania**. East African Journal of Science, Technology and Innovation 4(3).	• 300 **rodent** serum samples were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 8.7%.					
73)Turlewicz-Podbielska H. *et al.* (2023). **Seroprevalence of *Toxoplasma gondii* in domestic cats, dogs and rabbits from Poland**. Veterinary Research Communications, 47(3), 1753-1758.	• serum samples from 193 **cats**, 204 **dogs**, and 71 **rabbits** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was: in cats: 49.74% in dogs: 28.92% in rabbits: 1.41%.					
74)Henneb M. *et al.* (2019). **Seroprevalence and risk factors of *Toxoplasma gondii* infection in rabbit of local Algerian population**. Veterinary World, 12(6), 855.	• 350 blood samples from **rabbits** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: overall seroprevalence was 14.6%.					

WILD ANIMALS

75)Galat M. *et al.* (2024). **Seroprevalence of *Toxoplasma gondii* in wild boars (*Sus scrofa*) hunted in Ukraine**. International Journal for Parasitology: Parasites and Wildlife, 23, 100901.	• 92 **wild boa**r sera were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species, a locally available ELISA, and an indirect immunofluorescence antibody test (IFAT). • *Results*: -using the majority criteria, 10 of the 92 samples tested with three methods were considered positive (seropositivity 10.9%). -an almost perfect agreement was observed between the two ELISAs (Kappa 0.897).		**Correlation with other methods**			

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76)Hidalgo-Hermoso E. *et al.* (2024). **High Exposure to Livestock Pathogens in Southern Pudu (*Pudu puda*) from Chile**. Animals 2024, 14, 526.	• Serum samples from 164 wild and captive **southern pudu** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence in wild pudus: 8.57% prevalence in captive pudus: 37.5%.					
77)Scherrer P. *et al.* (2024). ***Toxoplasma gondii* Infection in the Eurasian Beaver (*Castor fiber*) in Switzerland: Seroprevalence, Genetic Characterization, and Clinicopathologic Relevance**. The Journal of Wildlife Diseases, 60(1), 126-138.	• Serum samples from 247 **Eurasian beavers** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 45.8%.					
78)Thomson J. *et al*. (2024). **Detection of viable *Toxoplasma gondii* in retail venison**. Food Control, 160, 110354.	• **Meat juice** samples from 13 **venison products** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 15.4%.			Particular matrix		
79)Bouchard E. *et al.* (2023). **Canada Lynx (*Lynx canadensis*) as Potential Reservoirs and Sentinels of *Toxoplasma gondii* in Northern Canada**. Zoonotic Dis. 3, 6–17.	• **Fluids from thawed heart tissues** were collected from 454 **lynx** carcasses and tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was 19%.			Particular matrix		
80)Hernández-Ortiz A. *et al.* (2023). ***Toxoplasma gondii* and related Sarcocystidae parasites in harvested caribou from Nunavik, Canada**. International Journal for Parasitology: Parasites and Wildlife, 21, 246-254.	• **Fluids from caribou thawed hearts** were tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was 18%.			Particular matrix		
81)Kautto A.H. *et al*. (2023). ***Toxoplasma gondii* seroprevalence in reindeer (*Rangifer tarandus tarandus L.*) in northern Sweden: a cross-sectional study from 2014**. Acta Veterinaria Scandinavica, 65(1), 53.	• 528 **reindeer** serum samples were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 2.1%.					

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82)Scherrer P. *et al*. (2023). **Exploring the epidemiological role of the Eurasian lynx (*Lynx lynx*) in the life cycle of *Toxoplasma gondii***. International Journal for Parasitology: Parasites and Wildlife, 21, 1-10.	• Serum samples from 183 **Eurasian lynx** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species, an indirect immunofluorescence antibody test (IFAT), and in case of inconclusive results, immunoblot. • *Results*: -seroprevalence was 82% when the results from all serologic tests were taken into consideration -when comparing the performance of the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species and IFAT, a substantial agreement was observed between the two tests (Kappa 0.741).		Correlation with oter methods			
83)Crotta M. *et al.* (2022). **Analysis of seroprevalence data on Hepatitis E virus and *Toxoplasma gondii* in wild ungulates for the assessment of human exposure to zoonotic meat-borne pathogens**. Food Microbiology, 101, 103890.	• Serum samples from 331 **wild boars**, 323 **roe deer**, 96 **red deer**, 50 **mouflons**, and 104 **chamois** were tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was: in wild boars: 49.5% in roe deer: 40.2% in red deer:19.8% in chamois: 3.8% in mouflon: 24%.					
84)Engel L. *et al*. (2022). ***Toxoplasma gondii* in raccoons (*Procyon lotor*) in Germany: a serosurvey based on meat juice**. Parasitology Research, 121(12), 3417-3425.	• *Toxoplasma gondii* seroprevalence was determined on **meat juice** samples of 820 **free-living raccoons** using the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES. • *Results*: seroprevalence was 48.5%			Particular matrix		
85)Liu R.M. *et al.* (2022). **Investigation of *Toxoplasma* infection in zoo animals using multispecies ELISA and GRA7 nested PCR**. BMC Veterinary Research, 18(1), 335.	• 326 serum samples collected from **75 species of animals** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. A commercial latex agglutination (LAT) assay was used to re-examine the samples with doubtful and uncertain ELISA results. • *Results:* using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species, seroprevalence was 27% using LAT on ELISA doubtful samples, seroprevalence increased to 36.2%. **The ID SCREEN® TOXOPLASMOSIS Indirect Multi-species can detect antibodies on 31 of 75 species.**		Correlation with otermethods			Species validation
86)Stensgaard A.S. *et al*. (2022). **Sero-prevalence and risk factors of *Toxoplasma gondii* infection in wild cervids in Denmark**. International Journal for Parasitology: Parasites and Wildlife, 17, 288-294.	• 428 blood samples collected from **cervids** (87 fallow deer, 272 red deer, 55 roe deer, and 14 sika deer) were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 24.5%.					

87)Yue C. *et al* (2022). **Comparison of a commercial ELISA and indirect hemagglutination assay with the modified agglutination test for detection of *Toxoplasma gondii* antibodies in giant panda (*Ailuropoda melanoleuca*)**. International Journal for Parasitology: Parasites and Wildlife, 18, 287-291.	• This study focused on the agreement comparing modified agglutination test (MAT) with the ID SCREEN® TOXOPLASMOSIS Indirect Multi-species, 2 other ELISAS tests, and 1 IHA test, for detecting anti-*Toxoplasma gondii* antibodies in 100 blood samples from 55 captive **giant pandas.** • *Results*: the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species showed a sensitivity of 89% and a specificity of 86.7%, compared with MAT as reference standard. the degree of agreement between MAT and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species is substantial, with a kappa value of 0.637. **This study suggested that MAT was the recommended method for primary screening of anti-T. gondii antibodies in giant pandas and then verified by ELISA tests.**	Comparison with competitors	Correlation with other methods			
88)Bandelj P. *et al*. (2021). **High Seroprevalence of *Toxoplasma gondii* in Slovenian Wild Boars (*Sus scrofa*)**. Animals 2021, 11, 3139.	• Serum samples from 353 **wild boars** were tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was 62%.					
89)Gering E. *et al*. (2021). ***Toxoplasma gondii* infections are associated with costly boldness toward felids in a wild host**. Nature communications, 12(1), 1-8.	• Sera from 166 **hyenas** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 65%.					
90)Kvapil P. *et al.* (2021). **Biosurveillance of Selected Pathogens with Zoonotic Potential in a Zoo**. Pathogens 2021, 10, 428.	• 188 **zoo animals** (122 **mammals**, 65 **birds**, and one **reptile**) sera were tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: prevalence was: in mammals: 38% in birds: 0% in reptile:0%.					
91)Muñoz R. *et al*. (2021). **Serological prevalence and risk factors of *Toxoplasma gondii* in Zoo Mammals in Chile**. Preventive Veterinary Medicine, 194, 105445.	• Seroprevalence study in a **zoo** was performed on 350 samples from 324 animals belonging to **57 species of carnivores, non-human primates, macropods, ungulates, and rodents** using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: -anti-*Toxoplasma gondii* antibodies were found in **caracal, lion, Bengal tiger, jaguar, leopard, puma, ocelot, wolf, fox, wild dog, raccoon, bear, genet, gazelle, mouflon, Bactrian camel, llama, alpaca, deer, tapir, monkey**. -no positive samples were found in rodents or marsupials.					

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92)Sengupta M.E. *et al.* (2021). **Prevalence of *Toxoplasma gondii* and *Cryptosporidium* in feral and farmed American mink (*Neovison vison*) in Denmark**. Acta Parasitologica, 66(4), 1285-1291.	• **Meat juice** samples from 235 **feral mink** and 306 **farmed mink** antibodies were tested using the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: all farmed mink tested seronegative 53.6% of feral minks were seropositive.				Particular matrix	
93)Bier N.S. *et al.* (2020). **Seroprevalence of *Toxoplasma gondii* in wild boar and deer in Brandenburg, Germany**. Zoonoses and Public Health, 67(6), 601-606.	• Blood samples obtained from the **abdominal or thoracic cavity** of 125 **roe deer**, 180 **wild boar**, and 47 **red deer** were tested using ID the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: In roe deer: 12.8% In red deer: 6.4% in wild boar: 24.4%.				Particular matrix	
94)Plaza J. *et al.* (2020). **Detection of *Toxoplasma gondii* in retail meat samples in Scotland.** Food and waterborne parasitology, 20, e00086.	• **Meat juice** collected from 39 **beef**, 87 **lamb**, 71 **pork**, and 82 **venison** were screened using ID the SCREEN® TOXOPLASMOSIS Indirect Multi-species. • *Results*: seroprevalence was: In beef: 5.3% In lamb: 16.5% In pork: 2.9% In venison: 16%.					
95)Laforet C.K. *et al.* (2019). ***Toxoplasma gondii* seroprevalence in extensively farmed wild boars (*Sus scrofa*) in Denmark**. *Acta Veterinaria Scandinavica*, *61*(1), 1-4.	• Serum samples from 101 **wild boars** were screened for anti-*Toxoplasma gondii* antibodies using the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES. • *Results*: seroprevalence was 27.7%.					
96)Marková J. *et al*. (2019**). *Toxoplasma gondii*, *Neospora caninum* and *Encephalitozoon cuniculi* in animals from captivity (zoo and circus animals).** Journal of Eukaryotic Microbiology, 66(3), 442-446.	• Serum samples from 4 **elephants** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: all the 4 elephants were seropositive.					
97)Kornacka A. *et al*. (2018). **Survey of *Toxoplasma gondii* and *Neospora caninum* in raccoons (*Procyon lotor*) from the Czech Republic, Germany and Poland**. Veterinary parasitology, 262, 47-50.	• **Meat juice** from 44 **raccoons** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was 13.6%.				Particular matrix	

98)Kornacka A. *et al.* (2016). **The usefulness of direct agglutination test, enzyme-linked immunosorbent assay and polymerase chain reaction for the detection of *Toxoplasma gondii* in wild animals**. Veterinary parasitology, 228, 85-89.	• **Meat juices (tongue and diaphragm)** collected from 129 free-living carnivores and omnivores were analyzed using Direct Agglutination Test (DAT) and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: -seroprevalence was confirmed in 73.6% of examined samples (95 of 129) either using DAT or the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species; in 65.11% of samples when both immunological tests were used in parallel. -by using both serological tests: anti-*Toxoplasma gondii* antibodies were found in 77.5% of red foxes, 12.5% of badgers, 40% of martens, and 8.3% of raccoon dogs; antibodies against *Toxoplasma gondii* were also detected in one mink. **Agreement between DAT and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species was considered moderate (kappa value = 0.55).** ***Results described in this study indicated that both ELISA and DAT are simple and rapid tools for screening meat juice samples collected from wild animals for Toxoplasma infection.* (sic)**		Correlatyon with other methods	Particular matrix		
99)Formenti N. *et al*. (2015). ***Toxoplasma gondii* infection in alpine red deer (*Cervus elaphus*): its spread and effects on fertility**. PLoS One, 10(9), e0138472.	• 81 **red deer** sera were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: prevalence was 39.5%.				Epidemiological study	
100)Witkowski L. *et al.* (2015). **Seroprevalence of *Toxoplasma gondii* in wild boars, red deer and roe deer in Poland**. Parasite, 22:17.	• **Meat juice (from masseter tissues)** samples from 552 red deer (Cervus elaphus), 367 wild boars (Sus scrofa), and 92 roe deer (Capreolus capreolus) were tested for *Toxoplasma gondii* antibodies using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: anti-*Toxoplasma gondii* antibodies were detected in 24.1% of red deer, 37.6% of wild boars, and 30.4% of roe deer (95% CI: 22.0%, 40.5%).			Particular matrix		
101)Moskwa B. *et al*. (2014). **Detection of antibodies to *Neospora caninum* in moose (*Alces alces*): the first report in Europe**. Folia Parasitologica, 61(1), 34.	• Blood samples from 7 **moose** were tested using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: anti-*Toxoplasma gondii* antibodies were found in 2 of 7 examined samples.					

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102)Kamga-Waladjo A.R. *et al*. (2009). ***Neospora caninum* and *Toxoplasma gondii* in Lion (*Panthera leo*) from Senegal, West Africa**. Asian Journal of Animal and Veterinary Advances, 4(6), 346-349.	• Sera samples from 7 **lions** were analyzed using the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES. • *Results*: 3 for 7 sera (42.86%) were positive to anti-*Toxoplasma gondii* antibodies.					

MARINE ANIMALS

103)Calvo-Mac C. *et al*. (2020). **Exposure to *Toxoplasma gondii* in marine otters *(Lontra felina)* and domestic cats (*Felis catus*) in an arid environment in Chile**. Journal of wildlife diseases, 56(4), 962-964.	• Blood samples from 19 **marine otters** and 50 domestic **cats** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: for marine otters: 5% for cats: 8%.					
104)Bachand N. *et al.* (2019). **Serological and molecular detection of *Toxoplasma gondii* in terrestrial and marine wildlife harvested for food in Nunavik, Canada**. Parasites & vectors, 12(1), 1-10.	• **Heart fluids from 61 ringed seals** *(Pusa histida)* were analyzed using MAT and the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species. • *Results*: seroprevalence was: -using the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES: 30% -using MAT: 20%.		**Correlation with othermethods**	**Particular matrix**		
105)van de Velde N. *et al*. (2016). ***Toxoplasma gondii* in stranded marine mammals from the North Sea and Eastern Atlantic Ocean: findings and diagnostic difficulties**. Veterinary parasitology, 230, 25-32.	• Serum samples from 241 **marine mammals** were analyzed using the ID SCREEN® TOXOPLASMOSIS Indirect Multi-Species, IFA, and MAT. • *Results*: -the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES detected antibodies against *Toxoplasma gondii* in Long-finned pilot whale (*Globicephala melas*), Risso's dolphin (*Grampus griseus*), Short-beaked common dolphin (*Delphinus delphis*), White-beaked dolphin (*Lagenorhynctus albirostris*), Grey seal (*Halichoerus grypus*), Harbour seal (*Phoco vitulina*), and European otter (*Lutra lutra*). -seroprevalence was: using the ID SCREEN® TOXOPLASMOSIS INDIRECT MULTI-SPECIES: 2% in marine mammal samples when using a S/P% cut-off value of 50% and 7% when lowering the cut-off to 20%. 34% in otters when using a S/P% cut-off value of 50% and 44% when lowering the cut-off to 20% -using MAT: 41% in marine mammals -using IFAT: 12% in marine mammals.		**Correlation with other methods**			

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