DNA was determined by the COBAS Amplicor CT/NG. In agreement with the manufacturer, 200 µl of processed COBAS Amplicor CT/NG medium was used for DNA isolation using the Qiagen DNA mini kit (Qiagen GmbH, Hilden, Germany). For the Ct-DT kit, 10 µl DNA was used. All CT positive samples were used for serovar typing. Discrepant samples were retested using COBAS TaqMan CT Test v2.0 (Roche Diagnostics Systems, Basel, Switzerland). A sample was considered CT positive (comparison standard) if both NAAT were positive or if one these NAAT and the retest was positive.

Results In all, 772 clients were included in the original study. COBAS medium was available from 71 CT positive clients and 179 CT negative samples were randomly selected. With the Ct-DT kit, 68 out of 71 CT positive samples (97%) tested positive and one borderline, leaving two discrepant results. Retesting of the latter two samples using the COBAS TaqMan assay resulted in two positive tests. All COBAS Amplicor CT negative samples were also negative with the Ct-DT kit. The sensitivity, specificity, positive and negative predictive value of the Ct-DT kit were 97%, 100%, 100% and 99%, respectively, if the borderline result is included in the positive results. Genotyping results are presented in Abstract P3-S1.12 table 1. Serovars D/Da, E and F were most prevalent. The serovar distribution is comparable to previously published Dutch data.

Abstract P3-S1.12 Table 1 Nucleic acid amplification test results, including serovar distribution

COBAS Amplicor	DEIA	RHA Serogroup	RHA Serovar	COBAS TaqMan	Final conclusion	N	
Positive	Positive	B	D/Da	NA	Positive	4	
			E	NA	Positive	37*	
		I	F	NA	Positive	18†	
			G/Ga	NA	Positive	3	
		C	I/Ia	NA	Positive	2	
			J	NA	Positive	1	
		None detected	None detected	Positive	Positive	1	
			None detected	Positive	Positive	1	
		Borderline	B	None detected	Negative	Positive	1
		Negative	NA	NA	Positive	Positive	2
Negative	Negative	NA	NA	NA	Negative	179	
					Total	250	

*One double infection with serogroup C, serovar K.

†One double infection with serogroup C (no serovar detected).

Conclusion Compared with COBAS Amplicor CT/NG, the *Chlamydia trachomatis* detection and Ct Genotyping RHA Kit combination is a sensitive and highly specific assay to detect *Chlamydia trachomatis*. Moreover, it is a more rapid and easy to perform method to detect the most commonly detected serotypes compared to PCR-RFLP typing.

P3-S1.13 ESTABLISHMENT OF A PROTOCOL FOR THE DETECTION OF CHLAMYDIA TRACHOMATIS IN SEMEN SPECIMENS USING THE COBAS® 4800 CT/NG TEST

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¹B de Barbeyrac, ¹V Mehats, ²A Papaxanthos, ¹C Bébér. ¹Inra-Université de Bordeaux, Bordeaux, France; ²CHU Bordeaux, Bordeaux, France

Background In addition to common urogenital samples, semen specimens are used to detect *Chlamydia trachomatis* (CT). In France, testing of semen specimens is mandatory by law in context of donors and in vitro fertilisation. However, semen specimens are known to show significant inhibition in PCR assays. Analysis of cycles of threshold (ct) values can be used to determine inhibition and limits of detection of assays.

Objective To establish a suitable protocol for the highly sensitive detection of CT in semen specimens using the fully automated cobas 4800® CT test.

Materials and Methods We evaluated inhibition rates and limits of detection (LOD) for different semen sample volumes by ct value analysis in the cobas® 4800 CT test. Semen samples were obtained from 100 patients visiting the reproduction biology department of the Bordeaux University hospital. Between 5 and 67 replicates of semen ranging from 1 to 50 µl were each added to 4.5 ml of cobas® PCR media and run in the cobas® 4800 CT test. The inhibition rate was compared to the inhibition rate obtained in 323 urogenital swabs and 278 urines using the ct values of the internal control (IC). Thereafter, semen volumes that showed the lowest inhibition rates were selected to determine the LOD, by comparing mean ct values for the target in the cobas® 4800 CT test using semen specimens spiked with different concentrations of CT.

Results Mean IC ct values in semen volumes ranging from 1 to 40 µl did not differ from those obtained in urogenital swabs and urines, whereas semen volumes of 50 µl resulted in a marked increase in IC ct values indicating inhibition. Therefore, semen volumes of 25, 40, and 50 µl diluted in 4.5 ml of cobas® PCR media were tested to determine the LOD. Mean ct values generated by the target CT are shown in Abstract P3-S1.13 table 1. Ct values were similar in samples of 25 µl semen and controls, but were higher or even negative in 40 and 50 µl semen volumes indicating that a semen volume of 25 µl showed the lowest LOD (10–5) combined with a low inhibition rate.

Abstract P3-S1.13 Table 1 Comparison of ct values in different semen sample volumes spiked with serial dilutions of CT-infected cells

Serial dilutions of CT-infected cells	Ct values			
	Control sample	25 µl semen	40 µl semen	50 µl semen
10 ⁻¹	31	30.2	30.6	32.6
10 ⁻²	33.2	33.3	32.8	35.8
10 ⁻³	35.7	36.8	35.3	37.5
10 ⁻⁴	37.9	37.1	38	40.5
10 ⁻⁵	40	40.0	neg	neg

Conclusion Semen specimens can be tested in the cobas® 4800 CT test applying our easy to perform, highly sensitive, and low inhibition protocol.

P3-S1.14 EVALUATION OF THE PLATFORM COBAS® 4800 CT/NG TEST FOR DETECTING CHLAMYDIA TRACHOMATIS IN UROGENITAL SAMPLES

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B de Barbeyrac, V Mehats, M Clerc, C Le Roy, C Bébér. Inra-Université de Bordeaux, Bordeaux, France

Objectives To assess the performance of the Roche fully automated cobas® 4800 CT/NG test for the detection of *C trachomatis* (CT) infection in clinical specimens compared to the current routine practice.

Methods Consecutive clinical specimens sent to the Bacteriology department of the Bordeaux University Hospital, Bordeaux, between July and September 2010 were included. Results of the cobas® 4800 CT/NG test were compared with those obtained with the cobas® TaqMan CT 48 assay (Roche). For the latter, DNA from 200 µl of urine or swab resuspended in transport medium, (2SP or universal transport medium) was extracted on the MagNA Pure using the DNA I isolation kit (Roche) and amplified on the TaqMan 48 automates. The cobas® 4800 CT/NG performed DNA extraction