

# Progetto Trieste



## Real Check BOVINE URINE Cod. BOV01-20

### REFERENCE SET OF BOVINE URINES ANABOLIC HORMONES FREE

For the development and validation of analytical methods for the detection of veterinary drug residues, laboratories need sets of materials made of a representative number of bovine urines coming from different animals. These materials have to be homogeneous, well characterized and available in large quantities in order to be used by different laboratories as reference materials. The use of RealCheck materials, will allow a laboratory to compare the specificity of a kit or another analytical method, even after some time, and also to compare the data with those from other laboratories using the same set of reference materials.

#### General characteristics

Code	Type	N. animals	Sex	pH
BOV01	bullocks	10	m	8.5
BOV02	bullocks	4	m	8
BOV03	bullocks	5	m	7.5
BOV04	bullocks	3	m	7.5
BOV05	bullocks	2	m	8
BOV06	bullocks	10	m	8.5
BOV07	bullocks	18	m	8
BOV08	calves	7f + 15m	f + m	7.5
BOV09	calves	5f + 5m	f + m	7
BOV10	calves	40	f + m	6.5
BOV11	calves	6	f + m	6.5
BOV12	calves	6	f + m	7.5
BOV13	calves	3f + 3m	f + m	8
BOV14	2 years old cows + bullocks	3f + 3m	f + m	8.5
BOV15	calves	3	f	6
BOV16	calves	6	f + m	7
BOV17	calves	6	f + m	7
BOV18	calves	62	f + m	7
BOV19	UN	10	f + m	7.5
BOV20	UN	10	f + m	7.5

UN: unknown

#### Kind of materials

Lyophilised bovine urines from calves, bullocks and cows analyzed by instrumental method.

#### Quantity of materials provided

After reconstitution: 5 ml of each material.  
20 different materials are available (BOV01-20) and can be bought in sets of 5, 10, 15 or 20 different materials.

#### Materials preparation

Reconstitution, o/n incubation at +4 °C.

#### Storage

+4 °C.

#### Shelf-life

10 years from date of manufacturing.



(rev. 23/03/10)

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## Instrumental analyses results (µg/l ):

Molecule	BOV 01	BOV 02	BOV 03	BOV 04	BOV 05	BOV 06	BOV 07	BOV 08	BOV 09	BOV 10	BOV 11	BOV 12	BOV 13	BOV 14	BOV 15	BOV 16	BOV 17	BOV 18	BOV 19	BOV 20
Taleranol (β-zearalanol)	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57
Zeranol (α-zearalanol)	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56
β-zearalenol	0.69	<0.56	0.67	<0.56	0.76	0.57	<0.56	<0.56	0.75	0.93	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	0.62	<0.56	<0.56	<0.56
α-zearalanol	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58
Zearalanone	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
Zearalenone	<0.68	<0.68	1.49	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
β-trenbolone	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54
α-trenbolone	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
17β - 19nortestosterone	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59
17α - 19nortestosterone	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	1.14	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55
α-boldenone	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
α-nortestosterone	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
β-boldenone	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
β-nortestosterone	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
DES	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Dienestrol	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Hexestrol	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Beclometasone	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Betametasona	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Dexametasone	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Flumetasone	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Methylprednisolone	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Prednisolone	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	1.5	1	1.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	1.2	<0.8
Prednisone	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Triamcinolone	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Triamcinolone acetionide	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
6β OH - cortisol	6.29	5.07	6.12	0.37	3.09	1.10	8.33	13.69	12.93	18.62	0.55	2.16	5.99	2.87	4.49	2.03	10.38	12.26	1.92	6.68
6α OH - cortisol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cortisol	20.33	26.46	23.56	6.83	35.26	3.65	21.59	35.92	32.51	42.56	3.18	4.94	15.9	10.48	12.51	4.18	23.28	31	5.37	19.14
β-estradiol	<0.5	<0.5	0.76	<0.5	<0.5	0.55	1.17	0.55	0.61	1.55	<0.5	<0.5	0.57	5.91	<0.5	0.72	0.71	0.73	<0.5	<0.5
α-estradiol	0.76	1.62	2.61	0.39	1.39	2.17	3.64	0.39	0.83	3.96	0.53	1.25	<0.5	36656	0.94	0.71	2.41	0.76	1.23	14.24
Estrone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	151	<0.5	<0.5	<0.5	<0.5	<0.5	1.52
Testosterone	2.58	5.60	3.97	0.55	13.46	0.91	13.91	0.93	1.11	8.97	2.56	1.58	0.40	2.23	3.36	3.40	6.20	1.72	2.84	0.58
Epi-testosterone	18.66	29.88	23.84	9.39	24.9	20.19	49.08	34.75	38.25	96.22	31.04	29.14	20.41	60.95	33.97	56.64	70.96	36.35	29.61	22.77

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