



## Quality Assessment Schemes Program

**2017**

### ESfEQA EQA programs

The European Society for External Quality Assessment offers laboratories a wide range of EQA schemes organized in four areas: biochemistry, immunology, microbiology and hematology.

The ESfEQA programs for external quality assessment are intended for those who perform laboratory investigations either in their own laboratories or who are responsible for the quality in medical laboratories.

### About ESfEQA samples and services

ESfEQA provides samples and services of high quality, reliability, convenience and flexibility.

### Quality

The suitability of all samples for different technologies is achieved by multidisciplinary approaches to assess the reliability of control materials. All samples of human origin are designed for commutability.

ESfEQA is accredited according to DIN EN ISO/ IEC 17043: 2010.

### Reliability

All fields of activity necessary to provide EQA surveys are streamlined for reliability: production and selection of sample materials, shipment logistics as well as handling electronic data and results.

Prior to their use in EQA schemes, samples are carefully selected, thus guaranteeing high and constant sample quality. For timely shipment, ESfEQA works hand in hand with reliable distributors. And finally, participants have full and reliable control over their data.

### Convenience and flexibility

ESfEQA's proficiency testing software features an easy-access web interface which allows participants to submit their results and to retrieve the statistic reports that are displayed directly online. Requests for new method, instrument and reagent codes can be made

online. The subscription to any ESfEQA program allows participants to submit up to three results obtained from a single control set using different devices. Reports are provided online as pdf-files within 3 weeks after the deadline of result submission. Report files can be stored electronically, forwarded and printed.

### Sample Ordering

ESfEQA offers EQA schemes worldwide and cooperates with reliable regional distributors. They are the direct business partners of participants, responsible for the ordering process, invoicing and local shipment of survey samples .

ESfEQA offers programs with 2, 4 or 12 surveys per year. In general, programs should be ordered for an entire calendar year. To ensure a cost-effective shipping process, survey samples are shipped semi-annually as long as this frequency is permitted by sample stability.

### New Programs

Based on the feedback of our participants, ESfEQA will launch several new EQA programs in 2017 to complete our portfolio. Please contact us for further suggestions on new programs.

Programs that have not been listed on the ESfEQA ISO 17043 accreditation certificate yet are marked in this catalogue as not accredited.

### Survey Calendar

The dates for survey sample ordering, begin of result entry and deadline for result entry are published in this catalogue and on the ESfEQA website ([www.esfeqa.eu](http://www.esfeqa.eu)).

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### ESfEQA GmbH

Siemensstraße 38

69123 Heidelberg

GERMANY

phone +49(0)6221-894669-70

fax +49(0)6221-894669-90

[info@esfeqa.eu](mailto:info@esfeqa.eu)

[www.esfeqa.eu](http://www.esfeqa.eu)

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## BIOCHEMISTRY PROGRAMS

### BLOOD GAS AND ELECTROLYTES

BG

2 liquid buffered aqueous solution samples (minimum 2 mL).  
4 surveys per year.

#### Analytical parameters:

Calcium	pCO <sub>2</sub>	Sodium
Chloride	pH	Urea
Glucose	pO <sub>2</sub>	
Lactate	Potassium	

### CARDIAC MARKER

CM

Lyophilized samples (3 mL) of human sera with added analytes of human origin.  
4 or 12 surveys per year. One sample per survey in monthly program (CM12), two samples per survey in quarterly program (CM4).

#### Analytical parameters:

BNP	Homocysteine	NT-proBNP
CK-MB (mass)	Myoglobin	Troponin I
CK-MB (activity)		Troponin T

### CLINICAL CHEMISTRY

CC

Lyophilized samples (5 mL) of human sera with added enzymes and proteins of human origin.  
4 or 12 surveys per year. One sample per survey in monthly program (CC12), two samples per survey in quarterly program (CC4).

#### Analytical parameters:

Albumin	Creatinine	Potassium
ALP Alkaline phosphatase	Gamma GT	Sodium
ALT/GPT	Glucose	TIBC Total Iron Binding Capacity
Amylase	HDL Cholesterol	Total protein
AST/GOT	Iron	Triglycerides
Bilirubin, direct	Lactate	Urea
Bilirubin, total	LDH Lactate Dehydrogenase	Uric acid
Calcium	LDL Cholesterol	
Calcium (ionized)	Lipase	
Chloride	Lithium	
Cholesterol	Magnesium	
CK Creatinkinase	Phosphate	

**DRUGS OF ABUSE****DAT**

2 liquid samples (minimum 1 mL) of filtered human urines with added drugs for qualitative analysis.  
4 surveys per year.

**Analytical parameters:**

Acetylmorphine	Buprenorphine	Opiates
Amphetamines	Cannabinoids	Tricyclic Antidepressants
Barbiturates	Cocaine	
Benzodiazepines	Methadone	

**ETHANOL****ETH**

2 liquid samples (1.5 mL of human sera) with added compounds.  
4 surveys per year.

**Analytical parameters:**

Ethanol

**GLYCATED HEMOGLOBIN****GHB**

2 lyophilized samples (minimum 0.5 mL) of hemolysate of human blood.  
4 surveys per year.

**Analytical parameters:**

HbA1c (mmol/mol)	Hemoglobin
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**LIPIDS****LIP**

2 lyophilized samples (3 mL) of human serum.  
4 surveys per year.

**Analytical parameters:**

Apolipoprotein A1	HDL Cholesterol	Total Protein
Apolipoprotein B	LDL Cholesterol	Triglycerides
Cholesterol	Lp (a)	

**QUALITATIVE URINE ANALYSIS (URINE STICK)****US**

2 liquid samples (min. 10 mL) of urine preparation of human origin with added preservatives and stabilizers.  
4 surveys per year.

**Analytical parameters:**

Bilirubin	Leucocytes	Total Protein
Glucose	Nitrite	Urobilinogen
Hemoglobin	pH	
Ketone bodies	Specific Gravity	

## THERAPEUTIC DRUGS

TDM

2 liquid samples (minimum 2 mL) with added compounds.  
4 surveys per year.

### Analytical parameters:

Amikacin	Gentamicin	Procainamide
Carbamazepine	Lidocain	Salicylate
Chinidine	NAPA	Theophylline
Chloramphenicol	Paracetamol	Tobramycin
Digoxin	Phenobarbital	Valproic Acid
Disopyramide	Phenytoin	Vancomycin
Ethosuximide	Primidone	

## URINE CHEMISTRY

UC

2 lyophilized samples (minimum 5 mL) of urine of human origin with added preservatives and stabilizers.  
4 surveys per year.

### Analytical parameters:

Albumin / Microalbumin	Magnesium	Urea
Calcium	Phosphate	Uric acid
Chloride	Potassium	
Creatinine	Total protein	
Glucose	Sodium	

## IMMUNOLOGY PROGRAMS

### ALLERGOLOGY INHALE ALLERGENS

AL1

2 liquid samples (minimum 1 mL) of human serum.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

**Analytical parameters (below listed parameters are exemplary):**

IgE total	e 84	hamster epithelia	w 1	common ragweed
d 1 derm. pteronyssinus	k 82	latex	w 2	western ragweed
d 2 derm. farinae	m 1	penicilinum chrysogenum	w 6	mugwort
d 70 acarus siro	m 3	aspergillus fumigatus	w 7	muguerite
e 1 cat epithelia	m 6	alternaria	w 9	buckhorn plantain
e 3 horse epithelia	t 2	alder	w 20	nettle
e 5 dog epithelia	t 3	birch	w 206	camomile
e 6 guinea pig epithelia	t 4	hazel		
e 82 rabbit epithelia	t 7	oak		

### ALLERGOLOGY FOOD ALLERGENS & INSECT VENOM ALLERGENS

AL2

2 liquid samples (minimum 1 mL) of human serum.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

**Analytical parameters (below listed parameters are exemplary):**

IgE total	f 25	tomato	f 78	casein
f 1 egg white	f 31	carrot	f 84	kiwi
f 2 milk	f 33	orange	f 85	celery
f 3 cod	f 35	potato	f 91	mango
f 4 wheat flour	f 37	blue mussel	f 92	banana
f 5 rye flour	f 41	salmon	f 218	pepper
f 12 pea	f 49	apple	f 256	walnut
f 13 peanut	f 48	onion	g 12	rye
f 14 soybean	f 59	octopus	i 1	bee venom
f 17 hazelnut	f 75	egg yellow	i 3	wasp venom
f 23 crab	f 76	$\alpha$ -laktalbumin	i 6	cockroach
f 24 shrimp	f 77	$\beta$ -laktoglobulin		

### AUTOIMMUNITY 1

A11

2 liquid samples (minimum 1 mL) of human sera.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

**Analytical parameters:**

ANA-Screening	ENA-Screening	anti-SM
anti-ds-DNA	anti-SSA/Ro	anti-U1-nRNP
	anti-SSB/La	anti-Scl 70

## AUTOIMMUNITY 2

AI2

New Program

2 liquid samples (minimum 1 mL) of human sera.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

### Analytical parameters:

anti-CCP	anti-MCV	RF
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## AUTOIMMUNITY 3

AI3

New Program

2 liquid samples (minimum 1 mL) of human sera.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

### Analytical parameters:

anti-Cardiolipin	anti-β2-Glycoprotein
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## HORMONES

HOR

Liquid or lyophilized samples (minimum 2 mL) of human sera with added analytes of human origin.  
4 or 12 surveys per year. One sample per survey in monthly program two samples per survey in quarterly program.

### Analytical parameters:

Aldosterone	Human Growth Hormone	T3, free
AMH	Insulin	T3, total
Androstendione	LH (Luteinizing Hormone)	T4, free
Calcitonin	Estradiol	T4, total
C-Peptide	Folate	Testosterone
Cortisol	IgE	TSH
DHEA-S	PTH	Vitamin B12
Estriol	Progesterone	Vitamin D
FSH	Prolactin	
hCG	SHBG	

## SPECIFIC PROTEINS

SP

Liquid (minimum 1 mL) or lyophilized samples (1 mL) of human sera with added analytes of human origin.  
4 or 12 surveys per year. One sample per survey in monthly program (SP12), two samples per survey in quarterly program (SP4).

### Analytical parameters:

Albumin	C4	IgM
Alpha-1-acid glycoprotein	Ceruloplasmin	Prealbumin
Alpha-1-antitrypsin	CRP (C-Reactive Protein)	RF
Alpha-2-macroglobulin	Haptoglobin	Transferrin
ASO	IgA	
Beta-2-microglobulin	IgE	
C3	IgG	



**TUMOR MARKER****TM**

Liquid or lyophilized samples (minimum 2 mL) of human sera with added analytes of human origin.  
4 or 12 surveys per year. One sample per survey in monthly program, two samples per survey in quarterly program.

**Analytical parameters:**

AFP	CA 125	PSA, total
CEA	CA 15-3	PSA, free
CA 19-9	Ferritin	PSA, complex

**TUMOR MARKER/HORMONES****TMH**

Lyophilized sample (minimum 3 mL) of human sera with added analytes.  
4 or 12 surveys per year. One sample per survey in monthly program (TMH12), two samples per survey in quarterly program (TMH4).

**Analytical parameters:**

AFP	Ferritin	PTH
Aldosterone	Folate	SHBG
AMH	FSH	T3, free
Androstendione	hCG	T3, total
CA 125	Human Growth Hormone	T4, free
CA 15-3	IgE	T4, total
CA 19-9	Insulin	Testosterone
Calcitonin	LH (Luteinizing Hormone)	Thyreoglobulin
CEA	Progesterone	TSH
Cortisol	Prolactin	Vitamin B12
C-Peptide	PSA, free	Vitamin D
DHEA-S	PSA, complex	
Estradiol	PSA, total	

IMMUNOLOGY

## MICROBIOLOGY PROGRAMS

### ADENOVIRUS

ADE

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

#### Analytical parameters:

IgA, IgG and IgM antibodies against Adenovirus

### ASPERGILLUS FUMIGATUS

ASF

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

#### Analytical parameters:

IgA, IgG and IgM antibodies against Aspergillus fumigatus

### BACTERIOLOGY

BAC

4 lyophilized samples (pure strains and/or mixture of bacteria): 2 for identification and 2 for antibiotic susceptibility testing.  
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

#### Analytical parameters:

Identification (genus and species) Antibiotic susceptibility testing

### BORRELIA

BOR

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

#### Analytical parameters:

IgG and IgM antibodies against Borrelia

### BRUCELLA

BRU

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

#### Analytical parameters:

IgA, IgG and IgM antibodies against Brucella

## CHLAMYDIA PNEUMONIAE

CHP

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

### Analytical parameters:

IgG, IgM, and IgA antibodies against Chlamydia Pneumoniae

## CHLAMYDIA TRACHOMATIS

CHT

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

### Analytical parameters:

IgG, IgM, and IgA antibodies against Chlamydia Trachomatis

## COXSACKIEVIRUS

COX

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

### Analytical parameters:

IgA, IgG and IgM antibodies against Coxsackievirus

## ECHO-VIRUS

ECH

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

### Analytical parameters:

IgA, IgG and IgM antibodies against ECHO-Virus

## ENTEROVIRUS

ENT

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New Program

### Analytical parameters:

IgA, IgG and IgM antibodies against Enterovirus

**EPSTEIN-BARR VIRUS****EBV**

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-EBV VCA IgG + total      anti-EBV EBNA-1 IgG + total      anti-EBV VCA IgM

**HEPATITIS A VIRUS****HAV**

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-HAV IgG + total      anti-HAV IgM

**HEPATITIS B VIRUS****HBV**

2 liquid samples (minimum 1 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-HBs      anti-HBe      HBeAg  
anti-HBc      HBsAg (qual. and quant.)      anti-HBc IgM

**HTLV I/II****HTL**

2 liquid samples (1 mL) of human plasma.  
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

**New Program****Analytical parameters:**

anti HTLV I      anti HTLV II

**INFECTIOUS DISEASE COMBINATION CONTROL****INF**

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-HIV 1/2      anti-HBc      HBsAg  
anti-HCV

**INFLUENZA A VIRUS****INA**

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

**New Program****Analytical parameters:**

IgA, IgG and IgM antibodies against Influenza A Virus

## INFLUENZA B VIRUS

INB

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

### Analytical parameters:

IgA, IgG and IgM antibodies against Influenza B Virus

## LEPTOSPIRA

LEP

2 liquid samples (0,5 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

### Analytical parameters:

IgG and IgM antibodies against Leptospira

## MEASLES

MEA

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

### Analytical parameters:

IgG and IgM antibodies against Measles Virus

## PARAINFLUENZA VIRUS

PIN

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

New  
Program

### Analytical parameters:

IgA and IgG antibodies against Parainfluenza Virus

## PARVOVIRUS B19

PAR

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

### Analytical parameters:

IgG and IgM antibodies against Parvovirus B19

**RESPIRATORY SYNCYTIAL VIRUS****RSV**

2 liquid samples (minimum 0,3 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

**New Program****Analytical parameters:**

IgG, IgM, and IgA antibodies against Respiratory Syncytial Virus (RSV)

**SYPHILIS****SYP**

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-Treponema pallidum antibodies

**ToRCH****TORCH**

2 liquid samples (1.5 mL) of human plasma.  
4 surveys per year.

**Analytical parameters:**

anti-CMV IgG + total	anti-HSV 1/2 IgM	anti-Toxoplasmosis IgG + total
anti-CMV IgM	anti-Rubella IgG + total	anti-Toxoplasmosis IgM
anti-HSV 1/2 IgG + total	anti-Rubella IgM	

**TROPICAL DISEASES 1****TD1**

4 liquid samples (1 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

**New Program****Analytical parameters:**

anti-Chikungunya Virus IgG/IgM	anti-West Nile Virus IgG/IgM	anti-Zika Virus IgG/IgM
anti-Dengue Virus IgG/IgM		

**TROPICAL DISEASES 2****TD2**

4 liquid samples (1 mL) of human plasma.  
2 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

**New Program****Analytical parameters:**

anti-Coxiella burnetii IgG/IgM (Q-fever)	anti-Rickettsia IgG/IgM	anti-Trypanosoma cruzi IgG/IgM (Chagas Disease)
anti-Leishmania IgG/IgM	anti-Schistosoma mansoni IgG/IgM	

## VARICELLA ZOSTER VIRUS

VZV

2 liquid samples (1 mL) of human plasma.  
4 surveys per year.

### Analytical parameters:

anti-VZV IgG + total

anti-VZV IgM

## HEMATOLOGY PROGRAMS

### COAGULATION

COA

Lyophilized samples (1 mL) of human plasma.  
4 or 12 surveys per year. One sample per survey in monthly program (COA12), two samples per survey in quarterly program (COA4).

### Analytical parameters:

aPTT (activated Partial Thromboplastin Time)  
Antithrombin III

D-Dimer  
Fibrinogen  
PT (prothrombin time)

Protein C  
Protein S

### ERYTHROCYTE SEDIMENTATION RATE

ESR

2 liquid samples (1,5 mL) of whole human blood.  
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043: 2010.

### Analytical parameters:

Erythrocyte Sedimentation Rate per hour

### FECAL OCCULT BLOOD

FOB

2 liquid or lyophilized samples (2 mL).  
2 surveys per year.

### Analytical parameters:

Human hemoglobin in faeces

### HEMOGRAM

HEM

Liquid samples (minimum 2.5 mL) of whole blood. The samples contain stabilized human red blood cells, white blood cells and platelets of human and/or non-human analogs.  
4 or 12 surveys per year. One sample per survey in monthly program (HEM12), two samples per survey in quarterly program (HEM4).

### Analytical parameters:

HCT (hematocrit)  
HGB (hemoglobin)  
MCH (mean corpuscular hemoglobin)

MCHC (mean cellular hemoglobin concentration)  
MCV (mean corpuscular volume)  
MPV (mean platelet volume)

PLT (platelets)  
RBC (red blood cells)  
RDW (RBC distribution width)  
WBC (white blood cells)

Date	Biochemistry	Immunology	Microbiology	Hematology (except Hemogram)	Hemogram
Nov 16	16 Deadline for Ordering (Q1-Q4 of 2017)	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4	monthly program surveys 1 - 12 quarterly program surveys 1 - 4
Jan 17	16 Begin of Result Entry	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly program survey 1 quarterly program survey 1
30	Deadline for Result Entry	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly program survey 1 quarterly program survey 1
31	Begin of Result Entry	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly program survey 1 quarterly program survey 1
Feb 17	6 Deadline for Result Entry	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly programs survey 1 quarterly programs survey 1	monthly program survey 1 quarterly program survey 1
10	Deadline for Ordering (Q2-Q4)	monthly programs surveys 4 - 12 quarterly programs surveys 2 - 4	monthly programs surveys 4 - 12 quarterly programs surveys 2 - 4	monthly programs surveys 4 - 12 quarterly programs surveys 2 - 4	monthly program surveys 4 - 12 quarterly program surveys 2 - 4
13	Deadline for Result Entry	monthly programs survey 1 - 2	semi-annual programs surveys 1 - 2	monthly programs survey 1 - 2	monthly program survey 2
13	Begin of Result Entry	monthly programs survey 2	monthly programs survey 2	monthly programs survey 2	monthly program survey 2
20	Begin of Result Entry	monthly programs survey 2	monthly programs survey 2	monthly programs survey 2	monthly program survey 2
Mar 17	6 Deadline for Result Entry	monthly programs survey 2 monthly programs survey 3	monthly programs survey 2 monthly programs survey 3	monthly programs survey 2 monthly programs survey 3	monthly program survey 3
13	Begin of Result Entry	monthly programs survey 2 monthly programs survey 3	monthly programs survey 2 monthly programs survey 3	monthly programs survey 2 monthly programs survey 3	monthly program survey 3
Apr 17	3 Deadline for Result Entry	monthly programs survey 3 monthly programs survey 4	monthly programs survey 3 monthly programs survey 4	monthly programs survey 3 monthly programs survey 4	monthly program survey 4
10	Begin of Result Entry	monthly programs survey 4 quarterly programs survey 2	monthly programs survey 4 quarterly programs survey 2	monthly programs survey 4 quarterly programs survey 2	monthly program survey 4 quarterly program survey 2
24	Deadline for Result Entry	monthly programs survey 3 monthly programs survey 4 quarterly programs survey 2	monthly programs survey 3 monthly programs survey 4 quarterly programs survey 2	monthly programs survey 3 monthly programs survey 4 quarterly programs survey 2	monthly program survey 4 quarterly program survey 2
May 17	2 Deadline for Result Entry	monthly programs survey 4 quarterly programs survey 2	monthly programs survey 4 quarterly programs survey 2	monthly programs survey 4 quarterly programs survey 2	monthly program survey 4 quarterly program survey 2
8	Begin of Result Entry	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly program survey 5 monthly program surveys 7 - 12
10	Deadline for Ordering (Q3-Q4)	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly program survey 5 monthly program surveys 7 - 12
22	Deadline for Result Entry	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly programs survey 5 monthly programs surveys 7 - 12	monthly program survey 5 monthly program surveys 7 - 12
29	Deadline for Result Entry	monthly programs survey 5	monthly programs survey 5	monthly programs survey 5	monthly program survey 5
29	Begin of Result Entry	monthly programs survey 5	monthly programs survey 5	monthly programs survey 5	monthly program survey 6



Date	Biochemistry	Immunology	Microbiology	Hematology (except Hemogram)	Hemogram
Jun 17	5 Begin of Result Entry 12 Deadline for Result Entry 26 Deadline for Result Entry	monthly programs survey 6 monthly programs survey 6	monthly programs survey 6 monthly programs survey 6	monthly programs survey 6 monthly programs survey 6	monthly program survey 6
Jul 17	10 Begin of Result Entry 24 Deadline for Result Entry 31 Deadline for Result Entry	monthly programs survey 7 quarterly programs survey 3 monthly programs survey 7 quarterly programs survey 3	monthly programs survey 7 quarterly programs survey 3 monthly programs survey 7 quarterly programs survey 3	monthly programs survey 7 quarterly programs survey 3 monthly programs survey 7 quarterly programs survey 3	monthly program survey 7 quarterly program survey 3 monthly program survey 7 quarterly program survey 3
Aug 17	2 Deadline for Ordering (Q4) 7 Begin of Result Entry 21 Deadline for Result Entry 28 Deadline for Result Entry 28 Begin of Result Entry	monthly programs surveys 10 - 12 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 8 monthly programs survey 8	monthly programs surveys 10 - 12 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 8 monthly programs survey 8	monthly programs surveys 10 - 12 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 8 monthly programs survey 8	monthly program surveys 10 - 12 quarterly program survey 4 monthly program survey 8 monthly program survey 8 monthly program survey 9
Sep 17	4 Begin of Result Entry 11 Deadline for Result Entry 25 Deadline for Result Entry	monthly programs survey 9 monthly programs survey 9	monthly programs survey 9 monthly programs survey 9	monthly programs survey 9 monthly programs survey 9	monthly program survey 9
Oct 17	2 Begin of Result Entry 9 Begin of Result Entry 23 Deadline for Result Entry 30 Begin of Result Entry	monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 11	monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 11	monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 10 quarterly programs survey 4 semi-annual programs survey 2 monthly programs survey 11	monthly program survey 10 quarterly program survey 4 monthly program survey 10 quarterly program survey 4 monthly program survey 11
Nov 17	13 Deadline for Result Entry 15 Deadline for Ordering (Q1-Q4 of 2018) 20 Deadline for Result Entry 27 Begin of Result Entry	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4 monthly programs survey 11 monthly programs survey 12	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4 monthly programs survey 11 monthly programs survey 12	monthly programs surveys 1 - 12 quarterly programs surveys 1 - 4 monthly programs survey 11 monthly programs survey 12	monthly program survey 11 monthly program surveys 1 - 12 quarterly program surveys 1 - 4 monthly program survey 11 monthly program survey 12
Dec 17	11 Deadline for Result Entry 18 Deadline for Result Entry	monthly programs survey 12 monthly programs survey 12	monthly programs survey 12 monthly programs survey 12	monthly programs survey 12 monthly programs survey 12	monthly program survey 12

# GENERAL TERMS FOR THE PARTICIPATION IN EXTERNAL QUALITY ASSESSMENT SURVEYS OF ESFEQA

## 1. Participation

The participation in the external quality assessment (EQA) surveys of ESfEQA is possible for everyone who performs laboratory tests in their own practice or in a managed medical laboratory. The following conditions for participation apply.

## 2. Consent to conditions for participation

With the registration by ESfEQA GmbH, the participant is in agreement with these general terms for participation.

## 3. Assignment of services

Individual parts for EQA (e.g. pretesting of values, packaging and shipping) can be assigned to subcontractors. ESfEQA is responsible for the work of the subcontractors.

## 4. ESfEQA catalog

The portfolio of the EQA services offered by ESfEQA and the analytes provided in the individual programs are described in the ESfEQA catalog. According to sample availability and number of participants, ESfEQA reserves the right to not provide all analytes listed in the catalogue for each EQA test sample.

## 5. Schedule

The schedule is published in the catalog and on the homepage of ESfEQA. It contains the binding deadlines for ordering, registration, testing period, deadline for result submission and latest point of time for the creation of the record. After the deadline for ordering and registration there is no claim for the acceptance of late orders and registrations. After the deadline for result submission, no further test results are accepted. The calendar date refers to the time zone at the place of business of ESfEQA in Heidelberg, Germany (GMT +1).

## 6. Cancellation of EQA surveys

ESfEQA reserves the right to cancel EQA surveys or to defer. This is being told to the participants before the originally planned shipping date of the samples. In this case, ESfEQA tries to offer an appropriate alternative date.

## 7. Registration

For the participation in the ESfEQA EQA surveys a registration is required. This can be completed online or the required information can be conveyed to ESfEQA in written form. The following information is required: laboratory name, name of the organization/hospital, name of participant, address, phone and fax number, and e-mail address.

## 8. Ordering of samples

Sales for ESfEQA EQA surveys normally take place through international distributors. If there is no distributor at hand in the country of the participant, the distribution may take place directly through ESfEQA. The order

transaction between participant and distributor is the responsibility of both parties. As a rule, an EQA program is ordered for an entire year.

## 9. Homogeneity and stability of the EQA samples

The EQA test samples chosen by ESfEQA were tested and evaluated in regard to homogeneity and stability. The homogeneity of the samples is specified as  $s_s \leq 0,3$  SD with  $s_s$  defined as inter-sample standard deviation and SD as the standard deviation of the proficiency test.

## 10. Labeling of the EQA samples

The EQA samples are identifiable by their labeling. The label consists of the short name of the program, the year of transmission, the run and a marker, when several samples are being used for a program and run. Thus, the sample with the labeling CM2016\_01\_a belongs to the program Cardiac Marker (CM) in the year 2016 and is sample "a" of the first transmission.

## 11. Shipping of EQA samples

Shipping of the EQA samples takes place by postal or parcel service on the dates published in the catalog. Due to governmental restriction, or because of insufficient stability, the shipping of individual EQA programs in specific countries can be excluded.

## 12. Instructions for Use

Instructions for Use are provided to the participants for each EQA program on the ESfEQA homepage. Amongst others they contain instructions for the preparatory treatment of the samples, the stability of the sample and the deadline for result submission.

## 13. Use of EQA samples

EQA samples are to be handled like patient samples and to be measured similarly as routine samples according to the test instructions of the reagent manufacturer. They may be used only for the purpose of participation at an EQA survey and not for purposes other than intended. Generally, the usual precautions in the laboratory for potential hazardous samples apply for the EQA samples.

## 14. Input of test results

Input of the measured values by the participant includes, when necessary, not only the actual measuring value but also the method used, the instrument used and the reagent used. The input mask of ESfEQA predetermines the required information for each EQA program. A list for methods, instruments and reagents is provided on the result entry form.

If the method, instrument or reagent used for the measurement by the participant is not contained in the list, participants convey this to ESfEQA through the input mask. He can use his selected method, instrument and reagent information immediately for the input of his test results.

The choice of method, instrument and reagent and the input of the measuring values are conveyed through the

web portal of ESfEQA. The participant receives the login-information required for the input from ESfEQA. The password consists of at least 8 characters, thereof at least 2 special characters. User name and password are to be kept in confidence by the participant.

Alternatively to the online input, the data can be put in by a form, that is sent to ESfEQA either by E-Mail (info@esfeqa.eu) or Fax (+49 6221 894669-90). The EQA program specific form is provided on the ESfEQA homepage.

All test results of the EQA participants conveyed in due time are assessed by ESfEQA. For the loss or the late arrival of his/her data the participant bears the risk. There is no claim for data assessment of test results arrived late.

Quantitative measuring values are generally specified with a value and a unit. The choice of the amount of specified digits is incumbent on the participant. Input of results as "< measurement range" or "< 100" are not allowed. If the analysis system shows such values, they are to be interpreted by the participant, e.g. as 0 or as specification of the value of the lower measurement range.

For the input of quantitative results, several units are normally available. The units are converted into the standard unit used by ESfEQA. This standard unit is also used for the creation of the records.

#### **15. Number of results per participant**

For each EQA sample and analyte, up to 3 values per participant can be entered. The values have to be determined by different, independent from each other, analytic systems.

#### **16. Correction of transmitted results**

After the input of the results into the web-input mask, a correction or change by the participant is no longer possible. If inaccurate values are recognized by the participant, (s)he can convey this to ESfEQA in written form specifying the reason up until the deadline for submission of the EQA survey. After verification and acceptance of the correction request, the result can be changed by ESfEQA. The same procedure applies for results submitted by e-mail and fax.

#### **17. Evaluation of EQA results**

For each analyte measured in the EQA program the kind of determination of target value and the acceptance criteria are predetermined. For quantitative parameters the target value normally is the consensus value. This value is calculated according to ISO/IEC 13528:2005 'Statistical methods for use in proficiency testing by interlaboratory comparisons' by robust statistics.

Qualitative samples are being tested thoroughly with differing systems before the usage as EQA samples. Thereby the target value is determined.

As far as reasonable and possible, system specific differences are being considered. The differentiation to the greatest possible extent takes place according to the method used, instrument, and reagent (M,I,R group). The minimum amount of results of an evaluation group is 5 values. If this amount is undercut, an evaluation in the superior group, e.g. all values, which have been measured with the same method (M group) takes place. The determination of the evaluation group is documented in the record.

The maximum allowable deviation from the target value of quantitative specified analytes is predetermined and can be found on the ESfEQA homepage. The interval was derived from the medical relevance and the reference interval. In the presentation of the report, the upper limit of the allowed range corresponds with a z-value of 3 and the lower limit with a z-value of -3.

#### **18. Creation of reports**

After the evaluation of the EQA survey, the participants receive reports, which are provided electronically. The reports contain the results submitted by the participant in comparison to the results of his peer group, a display and comparison of all peer groups, a graphic illustration of the data as histogram, a Shewhart-chart with the participant's previous results in the EQA surveys and in the case of quantitative surveys, which consist out of 2 samples, a Youden plot for the illustration of the z-values of both samples in comparison to other participants.

#### **19. Loss and damage of EQA test material**

In case of loss or damage of sample material, damages are compensated by ESfEQA GmbH when possible, without acknowledgement of any claims, by sending substitute test specimens when possible, if an immediate notification took place. However, the contract counts as fulfilled already at the posting date of the first shipping.

#### **20. Complaints**

After receipt of the EQA reports, complaints are possible within a period of 4 weeks. After the end of this period, the participant's claims on the basis of complaints are excluded. In case of justified complaints, a claim on performance of a substitute EQA survey exists. The eventual incidental costs for reagents, expenditure of time, etc. are not being compensated by ESfEQA, as long as ESfEQA is not liable according to cipher 21 of this conditions of participation.

#### **21. Guarantee**

For any type of loss, ESfEQA is liable only in the case of intention and gross negligence and in the case of presentation of the other eligibility requirements for claims.

#### **22. Confidentiality**

Individual EQA data is kept confidential. Data is disclosed to the participant, his or her distributor and the ESfEQA staff. ESfEQA collects, processes and uses personal data of the participant only as far as this is required for the performance of the EQA surveys, the creation of the records and for the purpose of quality assurance. This includes the forwarding of participant and device number identifiable data for the quality assurance measures to the individual manufacturer of the test system (device and reagent).

## **SCIENTIFIC ADVISORS**

Prof. Dr. Carl-Erik Dempfle, Mannheim, Germany  
Dr. med. Reno Frei, Basel, Switzerland  
Prof. Dr. Henri Wallaschofski, Erfurt, Germany  
Prof. Dr. Wolfgang Herrmann, Homburg, Germany  
Prof. Dr. Markus Herrmann, Bolzano, Italy

## **COMPANY INFORMATION**

### **ESFEQA GmbH**

CEO: Oliver Bošnjak  
Head of Operations: Dr. Dieter Groche  
Address: Siemensstraße 38  
69123 Heidelberg  
GERMANY  
Phone: +49(0)6221-894669-70  
Fax: +49(0)6221-894669-90  
E-mail: [info@esfeqa.eu](mailto:info@esfeqa.eu)  
Internet: [www.esfeqa.eu](http://www.esfeqa.eu)