ESfEQA

European Society for
External Quality Assessment

Quality Assessment Schemes Program

2020

DAkkS
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CONTENT - ESFEQA PROGRAMS

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ABOUT ESfEQA

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 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 and certificates that are displayed directly online. Requests for new method, instrument and reagent codes can be made online. The subscription to any ESfEQA program allows particpants 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 (within 10 days for monthly programs) 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 extends the EQA portfolio continously. 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 begin of result entry and deadline for result entry are published in this catalogue and on the ESfEQA website (www.esfeqa.eu).

Heidelberg, September 2019

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BIOCHEMISTRY PROGRAMS

BLOOD GAS AND ELECTROLYTES — BG

Liquid buffered aqueous solution or serum-based samples (minimum 2 mL). 4 or 12 surveys per year.
One sample per survey in monthly program (BG12), two samples per survey in quarterly program (BG4).

Analytical parameters:

Calcium	pCO_2	Sodium
Chloride	pH	Urea
Glucose	pO_2	
Lactate	Potassium	

CARDIAC MARKER — CM

Lyophilized samples (minimum 1 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

CEREBROSPINAL FLUID — CSF

2 liquid samples (minimum 1 mL) of synthetic spinal fluid. 4 surveys per year. Launch 3rd quarter 2020.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

Albumin	IgG	Sodium
Chloride	IgM	Protein
Glucose	Lactate	
IgA	LDH	

CLINICAL CHEMISTRY CC

Lyophilized samples (5 mL) of human sera with added enzymes and proteins of human origin.
2, 4 or 12 surveys per year. One sample per survey in monthly program (CC12), two samples per survey in quarterly and semiannual program (CC4 and CC2).

Analytical parameters:

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

* These parameters are not accredited according to DIN EN ISO/ IEC 17043:2010.

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)	D-Dimer	Protein C
	Fibrinogen	Protein S
Antithrombin III	PT (prothrombin time)	

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	Cannabinoids	Opiates
Amphetamines	Cocaine and metabolites	Synthetic Cannabinoids
Barbiturates	MDMA	(K2/Spice)*
Benzodiazepines	Methadone and metabolites	Tricyclic Antidepressants
Buprenorphine	Metamphetamines	

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

ETHANOL — ETH

Liquid samples (minimum 0.5 mL) with added compounds. 4 or 12 surveys per year. One sample per survey in monthly program (ETH12), two samples per survey in quarterly program (ETH4).

Analytical parameters:

Ethanol	Ammonia*

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

FECAL OCCULT BLOOD — FOB

2 liquid samples (minimum 0.5 mL) simulating extracted stool samples. 2 surveys per year.

Analytical parameters:

Human hemoglobin (qualitative and quantitative)

GLYCATED HEMOGLOBIN — GHB

Lyophilized samples (minimum 0.5 mL) of hemolysate of human blood.
4 surveys or 12 per year. One sample per survey in monthly program (GHB12), two samples per survey in quarterly program (GHB4).

Analytical parameters:

HbA1c	Hemoglobin

QUALITATIVE URINE ANALYSIS (URINE STICK) — US

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

New with hCG

Analytical parameters:

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

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

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	Glucose	Sodium
Amylase*	Magnesium	Urea
Calcium	Phosphate	Uric acid
Chloride	Potassium	
Creatinine	Total protein	

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

URINE SEDIMENTS — USED

2 liquid samples (minimum 1.5 mL) of urine of human origin. 4 surveys per year. Launch 2nd quarter 2020.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

Bacteria	Crystals	White cells
Casts	Red cells	

IMMUNOLOGY PROGRAMS

HCG — HCG

1 lyophilized sample (minimum 1 mL) of human serum with added analytes of human origin.
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

hCG qualitative

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 (HOR12), two samples per survey in quarterly program (HOR4).

Analytical parameters:

Aldosterone	hCG	T3, free
AMH	Homocysteine*	T3, total
Androstendione	Human Growth Hormone	T4, free
Calcitonin	IgE	T4, total
C-Peptide	Insulin	Testosterone
Cortisol	LH (Luteinizing Hormone)	Thyreoglobulin
DHEA-S	Methylmalonic Acid*	TSH
Estradiol	PTH	Vitamin B12
Ferritin	Progesterone	Vitamin D (25-OH)
Folate	Prolactin	17-OH-Progesterone*
FSH	SHBG	

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

PROCALCITONIN — PCT

2 lyophilized samples (minimum 0.5 mL) of human sera with added analyte.
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

Procalcitonin

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	Kappa light chains*
Alpha-1-antitrypsin	CRP (C-Reactive Protein)	Lambda light chains*
Alpha-2-macroglobulin	Haptoglobin	Prealbumin
ASO	IgA	RF
Beta-2-microglobulin	IgE	Transferrin
C3	IgG	

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

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 (TM12), two samples per survey in quarterly program (TM4).

Analytical parameters:

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

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	PSA, total
Aldosterone	Folate	PTH
AMH	FSH	SHBG
Androstendione	hCG	T3, free
CA 125	Homocysteine*	T3, total
CA 15-3	Human Growth Hormone	T4, free
CA 19-9	IgE	T4, total
Calcitonin	Insulin	Testosterone
CEA	LH (Luteinizing Hormone)	Thyreoglobulin
Cortisol	Methylmalonic Acid*	TSH
C-Peptide	Progesterone	Vitamin B12
DHEA-S	Prolactin	Vitamin D (25-OH)
Estradiol	PSA, free	17-OH-Progesterone*

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

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. The scheme is intended for Novatec, Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

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. The scheme is intended for Virion/Serion ELISA reagents. Other reagents upon request.

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 (AST). AST according to EUCAST guidelines (BAC-E) or according to CLSI guidelines (BAC-C)
4 surveys per year.

Analytical parameters:

Identification (genus and species) Antibiotic susceptibility testing (according to EUCAST or CLSI guidelines)

BORRELIA BOR

2 liquid samples (minimum 0.5 mL) of human plasma.
2 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.

Analytical parameters:

IgA, IgG and IgM antibodies against Brucella antibodies total against Brucella*

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

CHAGAS — CHA

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.

Analytical parameters:

anti-Trypanosoma cruzi IgG/IgM

CHIKUNGUNYA VIRUS — CHIKV

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. .

Analytical parameters:

IgG and IgM antibodies against Chikungunya Virus

CHLAMYDOPHILA PNEUMONIAE — CHP

2 liquid samples (minimum 0,5 mL) of human plasma.
2 surveys per year.

Analytical parameters:

IgG, IgM, and IgA antibodies against Chlamydophila pneumoniae

CHLAMYDIA TRACHOMATIS — CHT

2 liquid samples (minimum 0,5 mL) of human plasma.
2 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. The scheme is intended for Virion/Serion ELISA and Euroimmun IFT reagents. Other reagents upon request.

Analytical parameters:

IgA, IgG and IgM antibodies against Coxsackievirus

DENGUE VIRUS — DENV

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.

Analytical parameters:

IgG and IgM antibodies against Dengue Virus

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. The scheme is intended for Virion/Serion ELISA and Euroimmun IFT reagents. Other reagents upon request.

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. The scheme is intended for Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

Analytical parameters:

IgA, IgG and IgM antibodies against Enterovirus

EPSTEIN-BARR VIRUS — EBV

2 liquid samples (minimum 0,5 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 (minimum 0,5 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 (qual. and quant.*)	anti-HBe	HBeAg
anti-HBc IgG + total	HBsAg (qual. and quant.)	anti-HBc IgM

* The quantitative antibody determination is not accredited according to DIN EN ISO/ IEC 17043:2010.

HEPATITIS E VIRUS — HEV

2 liquid samples (minimum 0,5 mL) of human plasma. 4 surveys per year.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

Analytical parameters:

anti-HEV IgG + total	anti-HEV IgM

HTLV I/II — HTL

2 liquid samples (minimum 0,5 mL) of human plasma.
2 surveys per year.

Analytical parameters:

anti-HTLV I/II

INFECTIOUS DISEASE COMBINATION CONTROL — INF

2 liquid samples (minimum 0,5 mL) of human plasma. 4 surveys per year (INF4).
4 liquid samples (minimum 0,5 mL) of human plasma. 4 surveys per year (INF4x4).
2 liquid samples (minimum 0,5 mL) of human plasma. 2 surveys per year (INF2).

Analytical parameters:

anti-HIV 1/2 / p24 Ag	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. The scheme is intended for Novatec, Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

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. The scheme is intended for Novatec, Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

Analytical parameters:

IgA, IgG and IgM antibodies against Influenza B Virus

LEPTOSPIRA — LEP

2 liquid samples (minimum 0,3 mL) of human plasma.
2 surveys per year.

Analytical parameters:

IgG and IgM antibodies against Leptospira

MALARIA MICROSCOPY — MALM

2 slides of stained smears.
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

Analytical parameters:

Malaria Parasite Detection	Stage Identification
Species Identification	Quantification of Plasmodium falciparum

MEASLES — MEA

2 liquid samples (minimum 0,5 mL) of human plasma.
2 surveys per year.

Analytical parameters:

IgG and IgM antibodies against Measles Virus

MOSQUITO TRANSMITTED DISEASES — MTD

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.

Analytical parameters:

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

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. The scheme is intended for Novatec, Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

Analytical parameters:

IgA, IgG and IgM antibodies against Parainfluenza Virus

PARVOVIRUS B19 — PAR

2 liquid samples (minimum 0,5 mL) of human plasma.
2 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. The scheme is intended for Novatec, Virion/Serion, Virotech and Euroimmun ELISA reagents. Other reagents upon request.

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 (SYP4) in quarterly program, 2 surveys per year (SYP2) in semi-anual program.

Analytical parameters:

anti-Treponema pallidum antibodies (qualitative)
IgG and IgM antibodies against Treponema pallidum (qualitative)*
IgG and IgM, antibodies total against Treponema pallidum (semi-quantitative)*
IgG and IgM, antibodies total against Treponema pallidum (quantitative)*
Non-treponemal Lipoid antibodies (qualitative)*
Non-treponemal Lipoid antibodies (semi-quantitative)*

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

ToRCH — TORCH

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

Analytical parameters:

anti-CMV IgG (qual. and quant.*)
anti-CMV IgM
anti-HSV 1/2 IgG (qual. and quant.*)
anti-HSV 1/2 IgM
anti-HSV 1 IgG**
anti-HSV 2 IgG**
anti-HSV 1 IgM**
anti-HSV 2 IgM**
anti-Rubella IgG (qual. and quant.*)
anti-Rubella IgM
anti-Toxoplasma gondii IgG (qual. and quant.*)
anti-Toxoplasma gondii IgM

* The quantitative antibody determination is not accredited according to DIN EN ISO/ IEC 17043:2010.
** This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

VARICELLA ZOSTER VIRUS — VZV

2 liquid samples (minimum 0,5 mL) of human plasma. 2 surveys per year.

Analytical parameters:

IgG, IgM, and IgA* antibodies against Varicella Zoster Virus (VZV)

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

WEST NILE VIRUS — WNV

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.

Analytical parameters:

IgG and IgM antibodies against West Nile Virus

ZIKA VIRUS — ZIKV

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.

Analytical parameters:

IgG and IgM antibodies against Zika Virus

HEMATOLOGY PROGRAMS

BLOOD GROUPING — ABO

2 liquid samples (about 4 mL) of stabilized human red cells suspended in a buffered fluid and preservative.
4 surveys per year.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

ABO-Typing	Rhesus (D)-Typing

IMMUNOHEMATOLOGY — IMHEM

2 whole blood samples (patient) and 2 erythrocyte suspensions (donor). 2 surveys per year.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

ABO-Typing	Direct Coombs test	Cross-matching
Rhesus (D)-Typing	Antibody screening	
Kell-Antigen detection	Antibody identification	

ERYTHROCYTE SEDIMENT. RATE ON ALCOR ISED ANALYZERS — ESRAL

2 liquid samples (about 4 mL) of stabilized human red cells suspended in a buffered fluid and preservative.
2 surveys per year.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

New Program

Analytical parameters:

Erythrocyte Sedimentation Rate

ERYTHROCYTE SEDIMENTATION RATE ON ALIFAX ANALYZERS — ESRAF

3 liquid samples (about 3 mL) for transmittance measurement related to ESR values in human samples presented in Greiner tubes. 2 surveys per year.
This program is not accredited according to DIN EN ISO/ IEC 17043:2010.

Analytical parameters:

Erythrocyte Sedimentation Rate

ERYTHROCYTE SEDIMENTATION RATE — ESR

2 liquid samples (3 mL) containing erythrocytes in blood collection tubes (75x13mm) with pierceable caps.
4 surveys per year. This program is not accredited according to DIN EN ISO/ IEC 17043:2010. The samples are not suitable for testing on Alifax and Alcor iSED instruments.

Analytical parameters:

Erythrocyte Sedimentation Rate

HEMOGRAM — HEM

Plasma like fluid (minimum 2,5 mL). The samples contain stabilized human red blood cells, white blood cells and platelets of human and/or non-human analogs.
2, 4 or 12 surveys per year. One sample per survey in monthly program (HEM12), two samples per survey in quarterly and semiannual program (HEM4 and HEM2).

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)

HEMOGRAM INCL. 3-PART DIFF. — HEM3D

2 Plasma like fluid samples (minimum 1,5 mL). The samples contain stabilized human red blood cells, white blood cells and platelets of human and/or non-human analogs.
4 surveys per year.

Analytical parameters:

GRAN (granulocytes)*
HCT (hematocrit)
HGB (hemoglobin)
LYMPH (lymphocytes)*
MCH (mean corpuscular hemoglobin)
MCHC (mean cellular hemoglobin concentration)
MCV (mean corpuscular volume)
MID, MXD (mid-sized leucocytes)*
MONO (monocytes)*
MPV (mean platelet volume)
NEUT (Neutrophiles)*
PLT (platelets)
RBC (red blood cells)
RDW (RBC distribution width)
WBC (white blood cells)

* This parameter is not accredited according to DIN EN ISO/ IEC 17043:2010.

ESfEQA INTERNATIONAL EQA SCHEMES SURVEY SAMPLE SCHEDULE 2020
General

Program (Program Code)	Sample	Begin of Result Entry - Closing Date
Monthly Programs		
Blood Gas and Electrolytes (BG12)	2020_01_a	20/01/2020 - 10/02/2020
Clinical Chemistry (CC12)	2020_02_a	17/02/2020 - 09/03/2020
Cardiac Marker (CM12)	2020_03_a	16/03/2020 - 06/04/2020
Coagulation (COA12)	2020_04_a	13/04/2020 - 04/05/2020
Ethanol (ETH12)	2020_05_a	11/05/2020 - 02/06/2020
Glycated Hemoglobin (GHB12)	2020_06_a	08/06/2020 - 29/06/2020
Hormones (HOR12)	2020_07_a	13/07/2020 - 03/08/2020
Specific Proteins (SP12)	2020_08_a	10/08/2020 - 31/08/2020
Tumor Marker (TM12)	2020_09_a	07/09/2020 - 28/09/2020
Tumor Marker/Hormones (TMH12)	2020_10_a	05/10/2020 - 26/10/2020
Tumor Marker/Hormones (TMH12)	2020_11_a	02/11/2020 - 23/11/2020
	2020_12_a	26/11/2020 - 14/12/2020

Program (Program Code)	Sample	Begin of Result Entry - Closing Date
Quarterly Programs		
Blood Grouping (AB0)		
Bacteriology (BAC)	2020_01_a	17/02/2020 - 09/03/2020
Blood Gas (BG4)	2020_01_b	
Clinical Chemistry (CC4)		
Cardiac Marker (CM4)	2020_02_a	13/04/2020 - 04/05/2020
Coagulation (COA4)	2020_02_b	
Cerebrospinal Fluid (CSF)		
Drugs of Abuse (DAT)	2020_03_a	13/07/2020 - 03/08/2020
Epstein-Barr Virus (EBV)	2020_03_b	
Erythrocyte Sedimentation Rate (ESR)		
Ethanol (ETH4)	2020_04_a	05/10/2020 - 26/10/2020
Glycated Hemoglobin (GHB)	2020_04_b	
Hepatitis A (HAV)		
Hepatitis B (HBV)		
Hepatitis E (HEV)		
hCG (HCG)		
Hormones (HOR4)		
Infectious Disease Control (INF, INF4x4)		
Malaria Microscopy (MALM)		
Procalcitonin (PCT)		
Specific Proteins (SP4)		
Syphilis (SYP4)		
Therapeutic Drugs (TDM)		
Tumor Marker (TM4)		
Tumor Marker/Hormones (TMH4)		
Torch (ToRCH)		
Urine Chemistry (UC)		
Urine Sediments (USED)		
Qualitative Urine Analysis (US)		

Program (Program Code)	Sample	Begin of Result Entry - Closing Date
Semi-annual Programs 1		
Clinical Chemistry (CC2)	2020_01_a	17/02/2020 - 09/03/2020
Syphilis (SYP2)	2020_01_b	
Infectious Disease Control (INF2)	2020_02_a	05/10/2020 - 26/10/2020
	2020_02_b	

Program (Program Code)	Sample	Begin of Result Entry - Closing Date
Semi-annual Programs 2		
Adenovirus (ADE)		
Aspergillus fumigatus (ASF)	2020_01_a	20/04/2020 - 11/05/2020
Blood Grouping (ABO)	2020_01_b	
Borrelia (BOR)		
Brucella (BRU)	2020_02_a	12/10/2020 - 02/11/2020
Chagas (CHA)	2020_02_b	
Chikungunya Virus (CHIKV)		
Chlamydophila Pneumoniae (CHP)		
Chlamydia Trachomatis (CHT)		
Coxsackievirus (COX)		
Dengue Virus (DENV)		
Echovirus (ECH)		
Enterovirus (ECH)		
ESR on Alifax analyzers (ESRAF)		
ESR on Alcor analyzers (ESRAL)		
Fecal Occult Blood (FOB)		
HTLV I/II (HTL)		
Immunohematology (IMHEM)		
Influenza A (INA)		
Influenza B (INB)		
Leptospira (LEP)		
Measles (MEA)		
Mosquito Transmitted Diseases (MTD)		
Parvovirus B19 (PAR)		
Parainfluenza Virus (PIN)		
Respiratory Syncytial Virus (RSV)		
Varicella Zoster Virus (VZV)		
West-Nile Virus (WNV)		
Zika Virus (ZIKV)		

Place your order at least 2 months prior to the begin of the corresponding testing period (3 months for AB0, ESR, ESRAF, ESRAL, HEM4, HEM12, HEM3D, and IMHEM).

ESfEQA INTERNATIONAL EQA SCHEMES SURVEY SAMPLE SCHEDULE 2020
Hemogram

Program (Program Code) Monthly Program	Sample	Begin of Result Entry - Closing Date	Program (Program Code) Quarterly Program	Sample Name	Begin of Result Entry - Closing Date
Hemogram (HEM12)	2020_01_a 2020_02_a 2020_03_a 2020_04_a 2020_05_a 2020_06_a 2020_07_a 2020_08_a 2020_09_a 2020_10_a 2020_11_a 2020_12_a	27/01/2020 - 10/02/2020 11/02/2020 - 24/02/2020 25/02/2020 - 09/03/2020 13/04/2020 - 27/04/2020 04/05/2020 - 18/05/2020 25/05/2020 - 08/06/2020 13/07/2020 - 27/07/2020 03/08/2020 - 17/08/2020 24/08/2020 - 07/09/2020 12/10/2020 - 26/10/2020 02/11/2020 - 16/11/2020 23/11/2020 - 07/12/2020	Hemogram including 3-part Differential (HEM3D)	2020_01_a 2020_01_b 2020_02_a 2020_02_b 2020_03_a 2020_03_b 2020_04_a 2020_04_b	17/02/2020 - 02/03/2020 20/04/2020 - 04/05/2020 20/07/2020 - 03/08/2020 12/10/2020 - 26/10/2020
Program (Program Code) Quarterly Program	**Sample Name**	**Begin of Result Entry - Closing Date**	**Program (Program Code)** Semiannual Program	**Sample Name**	**Begin of Result Entry - Closing Date**
Hemogram (HEM4)	2020_01_a 2020_01_b 2020_02_a 2020_02_b 2020_03_a 2020_03_b 2020_04_a 2020_04_b	11/02/2020 - 24/02/2020 04/05/2020 - 18/05/2020 13/07/2020 - 17/08/2020 02/11/2020 - 16/11/2020	Hemogram (HEM2)	2020_01_a 2020_01_b 2020_02_a 2020_02_b	11/02/2020 - 24/02/2020 13/07/2020 - 17/08/2020

Place your order at least 2 months prior to the begin of the corresponding testing period (3 months for AB0, ESR, ESRAF, ESRAL, HEM4, HEM12, HEM3D, and IMHEM).

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

Status February 2018

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

2. Consent to conditions of participation
By registering with ESfEQA GmbH, the participant agrees to these general terms and conditions of participation.

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

4. ESfEQA catalog
The ESfEQA portfolio of offered EQA schemes and the analytes contained in the individual programs are described in the ESfEQA catalog. Depending on the availability of samples and the number of participants ESfEQA reserves the right, not to offer the entire spectrum of analytes for each EQA survey or sample.

5. Schedule
The schedule is published in the catalog and on the ESfEQA website. It contains the binding deadlines for ordering, the testing period, and the deadline for result submission. After the deadline for ordering there is no entitlement for the acceptance of orders. Results have to be submitted to ESfEQA electronically or by fax-form until the closing date. The calendar date refers to the time zone at the place of business of ESfEQA in Heidelberg, Germany (GMT +1).

6. Cancelation of EQA surveys
ESfEQA reserves the right to cancel or postpone EQA surveys. This information will be provided to participants before the originally planned shipping date of the samples. In this case, ESfEQA tries to offer an alternative date in a timely manner.

7. Registration
For the participation in ESfEQA EQA surveys a registration is required. This can be done online, or the necessary information can be provided to ESfEQA in written form. The following information is required: laboratory name, name of the organization/hospital, name of participant, number of analytical devices, and e-mail address.

8. Ordering of samples
The distribution of ESfEQA EQA surveys is usually carried out by international distributors. If there is no distributor available in the participant's region, sales can be carried out directly by ESfEQA. The ordering process between participants and distributors is the responsibility of the parties involved. As a rule, an EQA programme is ordered for a full calendar year. Orders placed during the year generally include the survey samples up to the end of the current calendar year.

9. Homogeneity and stability of EQA samples
The EQA survey samples selected by ESfEQA were examined and evaluated with regard to homogeneity and stability.

10. Designation of EQA samples
The EQA samples can be distinguished by their identifier. The identifier consists of the short name of the program, the year of the survey, the survey number and an index, when several samples are provided in a single survey. Thus, the sample with the labeling CM4_2018_01_a belongs to the quarterly program Cardiac Marker (CM4) in the year 2018 and is sample “a” of the first survey. Samples with the same designation are not necessarily identical, i. e. different results can be measured despite the same designation. ESfEQA makes the correct allocation to the original batch and thus to the target values.

11. Shipping of EQA samples
Shipping of the EQA samples takes place by postal or parcel service until the dates published in the catalog. Due to governmental restrictions, or insufficient stability, sample shipping of individual EQA programs to specific countries may be excluded.

12. Instructions for Use
Instructions for Use are provided to the participants for each EQA survey on the ESfEQA website (www.esfeqa.eu). A printout of the Instructions for Use is usually enclosed with the sample package. The Instructions for Use include instructions for the preparation of the samples, sample stability and the deadline for submission of results.

13. Use of EQA samples
EQA samples are to be handled like patient samples and measured in the same way as routine samples according to the instructions of the instrument and reagent manufacturers. They may only be used for the purpose of participating in an EQA survey and may not be used in a misappropriated manner. Generally, the usual precautions in the laboratory for potential hazardous samples apply for the EQA samples. In general, the usual precautionary measures in the laboratory for potentially infectious samples apply to EQA samples.

14. Submission of survey results
Where applicable the submission of the measured values by the participant includes, in addition to the actual measured value, the method used, the instrument used and the reagent used. The input mask in the evaluation software application TEQA used by ESfEQA predetermines the required information for each EQA program. A list of methods, instruments and reagents is provided in the configuration area.
If the method, instrument or reagent used for the measurement by the participant is not included in this selection list, participants communicate this to ESfEQA through the input mask and uses his/her own method, instrument and reagent. He or she can use these specifications directly to enter his or her test results.
The selection of method, instrument and reagent as well as the submission of results are to be transmitted through the web-application TEQA. Participants receive the login data required for the entry of results from ESfEQA. The password consists of at least 8 characters, of which at least 2 are special characters. User name and password are to be treated confidentially by the participant.
As alternative to the result submission via the web-applica-

tion TEQA, results can be submitted using forms, that can be sent to ESfEQA either by E-Mail (info@esfeqa.eu) or Fax (+49 6221 894669-90). The corresponding forms that are specific for each EQA program and survey are provided on the ESfEQA website.
ESfEQA evaluates all survey results that are submitted by the participants in due time. For loss or late arrival of his/her data the participant bears the risk. There is no claim for data assessment of test results arrived late. The participant bears the risk of loss of or delayed arrival of his or her data upon sending. There is no entitlement to an evaluation of late examination results.
Quantitative values are generally indicated with a value and a unit. The choice of the number of indicated decimal places is up to the participant. Specifications such as < measuring range or < 100 are not valid. If the analyzer system displays such values, they must be interpreted by the participant, e. g. as 0 or as an indication of the value of the lower measuring range. For results above and beyond the measuring range, the sample can be diluted (if recommended for individual applications) or reported as upper measuring range.
Several units are usually available for entering quantitative results. The units are converted into the standard unit used by ESfEQA. This standard unit is also used for creating reports.
Laboratories are obliged to treat their results confidentially and not to pass them on to third parties until the EQA survey report has been received. If ESfEQA becomes aware of the passing on or falsification of results or the collusion between participants, ESfEQA reserves the right to exclude those concerned from further participation in EQA survey conducted by ESfEQA as well as to exclude the issuance of reports.

15. Number of results per participant
For each EQA sample and analyte, up to 3 values per participant can be submitted. The values have to be determined by different analytical devices that are independent from each other.

16. Correction of transmitted results
Once the results have been submitted via the web-application TEQA, it is no longer possible for the participant to make any changes. If faulty values are detected by the participant, he/she can inform ESfEQA in written form until the deadline of result submission by specifying the reason. ESfEQA may change the information after checking and accepting the change request. The same applies to results sent by e-mail or fax.

17. Evaluation of EQA results
For each analyte of ESfEQA EQA surveys, the type of target value determination and the acceptance criterion are determined in advance. For quantitative parameters, the target value is usually the consensus value. This value is calculated according to ISO/IEC 13528:201505' Statistical methods for use in proficiency testing by interlaboratory comparisons' using robust statistics.
Qualitative samples are thoroughly tested with different analytical systems before being used as control material, thereby setting the target value.
System-specific differences are taken into account where appropriate and possible. The broadest possible distinction is made according to the method, instrument and reagent used (M, I, R group). The minimum number of results of an evaluation group is 5 values. If this number is not reached in the survey, the individual result has to be compared to the robust mean of the next larger group that can be evaluated. Usually, this is the group consisting of participants using the same method (M group) or the general group containing the results of all participants. The definition of the evaluation group is docume
The maximum permissible ranges of the target value of quantitatively determined analytes are defined in advance and can be retrieved from the ESfEQA website. The permissible range for each analyte is derived from its medical relevance as well as the reference interval. In the report display, the upper limit of the permissible range corresponds to a z-value of 3 and the lower limit to a z-value of -3.

18. Survey reports
In general, the participants will be provided with reports electronically via the TEQA web-application within three weeks after the deadline for submission of the results. The reports include the results submitted by the participant and their assessment compared to the target values. The data is displayed both in tabular form and as a graphic (e. g. Histogram, Shewart chart, Youden plot). The reports are intended for external quality assurance of laboratories. They may not be published, passed on or used for purposes other than quality assurance without the written consent of ESfEQA.

19. Certificates
Participants receive a certificate of participation for each EQA program they participate in. In addition, the participants receive a certificate for the parameters for which they have met the specified performance criteria in the respective EQA survey. Both certificates are made available to the participants via the TEQA web-application. The certificates are issued simultaneously with the reports.

20. Loss and damage of EQA test material
In the event of loss of or damage to the sample material, ESfEQA shall, if possible and to the extent that an immediate complaint has been made, replace the sample material by sending replacement samples without acknowledging any claims. However, the contract is fulfilled on the date of dispatch of the original sample material.

21. Complaints
After receipt of an EQA survey report, a complaint can be made within a period of 4 weeks. After expiry of this period, the participant's claims on the basis of a reclamation are excluded. In the event of a justified complaint, there is a claim for reimbursement of the amount paid for the EQA survey or for the conduction of a substitute EQA survey. It is for ESfEQA to deciding on one of the two options. ESfEQA GmbH does not reimburse any costs incurred for reagents, time expenditure etc. unless ESfEQA GmbH is liable in accordance with paragraph 2 of these General Terms and Conditions for Participation.

22. Warranty
ESfEQA shall only be liable for damages of any kind in the case of intent and gross negligence if the other prerequisites for claims are met. In all other respects, liability for damages of any kind, regardless of the basis of claim, including liability for culpa in contrahendo, is excluded.

23. Confidentiality
Individual EQA data is kept confidential. It is only known to the corresponding participant, his/her distributor and ESfEQA employees. ESfEQA collects, processes and uses personal data of the participant only to the extent necessary for the performance of EQA surveys, the preparation of the reports and for the purpose of quality assurance. This includes the forwarding of the data identifiable by subscriber and device number for quality assurance measures to the respective manufacturer of the analytical systems (device and reagent).

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