

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14264-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 03.02.2016 to 01.11.2020

Date of issue: 03.02.2016

Holder of certificate:

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Tests in the fields:

physical, physicochemical, chemical, sensorial and microscopical analyses to determine residues, contaminants, food additives and substances in wine, wine-based and wine-like beverages, spirits, vinegar, and fruit juices; Determination of the purity of nicotine salts; Specific analyses on water and waste water

Abbreviations used: see last page

Within the indicated fields of testing (**), the laboratory is permitted to modify test methods, to refine test methods and to develop new test methods. This does not require prior information and agreement of the DAkkS GmbH. The listed test methods may be considered as examples.

The testing laboratory has a current list of all test methods in the flexible scope of accreditation.

1 Photometric determination of ingredients and coloring in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

P1 009 02 Determination of total phenolic compounds by photometry
2008-12

P1 010 02 Determination of cyanides by photometry
2008-12

P2 008 03 Determination of intensity of color by photometry
2015-08

P1 016 00 Determination of bentonite and prussiate of potash demand by
2011-09 photometry

P2 047 00 Determination of color units of sugar ICUMSA by photometry
2011-09

P2 063 01 Determination of color units in beer by photometry
2015-09

P2 064 01 Determination of bittering units in beer by photometry
2015-09

2 Photometric determination of ingredients in food supplements

P1 026 00 Determination of total phenol content in food supplements by
2014-09 photometry

3 Titrimetric determination of acids in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

P1 004 06 Determination of titratable acids by titration (total acidity, pH)
2015-09

P1 005 05 Determination of sulphurous acid by iodometry (Free SO₂, total
2015-09 SO₂, reductones)

P1 013 02 2012-06	Determination of sulphurous acid after distillation
ASU L 31.00-8 1997-01	Analysis of food. Determination of the formol number of fruit and vegetable juices
P1 024 00 2014-10	Determination of total sulfur content in solids after distillation
4	Gravimetric determination of ingredients in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**
P2 014 01 2010-04	Gravimetric determination of sulfate concentration
P2 025 00 2009-03	Qualitative detection and determination of metatartaric acid by precipitation
5	Physical, physicochemical and chemical analyses of wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**
P1 001 03 2015-10	Determination of density and alcohol by oscillating U-tube, refractometer and NIR
P1 002 04 2013-11	Determination of alcohol after distillation
P2 026 00 2009-03	Stability test of potassium bitartrate (saturation temperature)
P1 014 01 2010-12	Determination of excess pressure (CO ₂) in sparkling drinks
P1 022 00 2013-05	Determination of water content by Mettler Toledo Moisture Analyzer HB43
P1 019 00 2013-01	Determination of CO ₂ content by Carbo QC

6 Determination of residues, contaminants, food additives and substances by liquid chromatography in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

ASU L 31.00-20 2004-12	Determination of patulin by HPLC
P1 003 04 2015-09	Determination of sugar and alcohol by HPLC
P1 006 04 2015-09	Determination of organic acids by HPLC
P1 007 04 2015-09	Determination of ethylene glycol and diethylene glycol by HPLC
P1 018 00 2011-10	Determination of ethanol in non-alcoholic beverages by HPLC
P1 020 00 2012-08	Determination of oxalic acid, succinic acid, fumaric acid, and gluconic acid by HPLC
P1 021 00 2013-04	Determination of nitrate by HPLC
P2 007 03 2015-08	Determination of anthocyanin spectrum by HPLC
P2 009 04 2015-08	Determination of synthetic food colorants by HPLC
P2 010 03 2015-08	Determination of malvidin-3,5-diglucoside (malvin) by HPLC
P2 028 03 2015-09	Detection and determination of coumarin by HPLC
P2 029 02 2015-08	Detection and determination of glycyrrhizic acid by HPLC
P2 030 02 2009-06	Detection and determination of resveratrol by HPLC

P2 031 02 2015-08	Detection and determination of furfural and hydroxymethylfurfural by HPLC
P2 032 02 2014-03	Detection and determination of preservatives by HPLC
P2 033 01 2009-06	Detection and determination of histamine by HPLC
P2 035 00 2009-04	Determination of monomeric and oligomeric proanthocyanidins (OPCs) by HPLC
P2 043 01 2015-08	Determination of styrene by HPLC
P2 075 00 2015-08	Determination of caffeine and theobromine in clear alcoholic and non-alcoholic beverages by HPLC

7 Determination of residues, contaminants, food additives and substances by LC-MS/MS in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

P2 040 05 2015-09	Determination of ochratoxine A (OTA), biogenic amines and natamycin (pimaricin) by LC-MS/MS
P2 048 01 2012-04	Determination of biogenic amines by LC-MS/MS
P2 054 00 2012-03	Determination of phthalates by LC-MS/MS
P2 055 00 2012-05	Determination of sweeteners by LC-MS/MS
P2 059 02 2015-09	Determination of pesticide residues by LC-MS/MS

8 Determination of residues, known and unknown substances by TripleTOF LC-MS in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

P2 072 01 Determination of pesticide residues by TripleTOF LC-MS
2015-09

P2 073 02 Determination of known and unknown substances by TripleTOF
2015-09 LC-MS

9 Determination of inorganic anions in wine, wine-based and wine-like beverages, spirits, vinegar, fruit juices and beer by ion-exchange chromatography (IC)

P2 005 03 Determination of dissolved anions by IC
2015-07

10 Determination of elements in wine and spirits by ICP-MS

P2 071 01 Quantitative multielement determination in beverages by
2015-08 ICP-MS

11 Determination of cations in wine, wine-based and wine-like beverages, spirits, vinegar, clear fruit juices and beer by ICP-OES**

P2 004 05 Determination of cations by ICP-OES
2015-09

P2 037 03 Determination of arsenic by ICP-OES
2012-01

P2 046 00 Determination of cadmium in wine by ICP-OES
2010-07

P2 053 00 Determining the egg yolk content in egg liqueur by determining
2011-11 the phosphorus content with ICP-OES

12 Determination of cations in waste water by ICP-OES

P2 041 02 Determination of cations in waste water by ICP-OES
2011-11

13 Determination of residues, contaminants, food additives and substances by gas chromatography (GC) in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**

P2 006 02 Determination of cyclic diglycerines and 3-methoxy-1,2-
2015-08 propanediol by GC/MSD

P2 012 03 Determination of volatile compounds (higher alcohols and
2011-10 esters) by GC/MS

P2 013 04 Determination of pesticide residues by GC/MS
2010-05

P2 015 03 Determination of ethyl carbamate (urethane) by GC/MS
2015-08

P2 016 04 Semi-quantitative determination of volatile ingredients and
2011-10 contaminants by SPME-GC/MS

P2 018 01 Determination of 4-ethylphenol and 4-ethylguajacol by SPME-
2015-09 GC/MS

P2 021 00 Determination of 2-aminoacetophenone by SPME-GC/MS
2009-03

P2 022 04 Determination of glycols and other parameters by GC/MS
2015-08

P2 023 03 Determination of aroma compounds according to regulation of
2015-07 flavorings by GC/MS

P2 042 00 Determination of naphthalene by SPME-GC/MS
2009-05

P2 044 02 Determination of aroma compounds (lactones) by GC/MS
2015-08

P2 049 00 2011-10	Determination of acrolein in spirits by SPME-GC/MS
P2 065 01 2015-09	Quantitative determination of diacetyl in beverages by SPME-GC/MS
P2 062 01 2015-09	Determination of benzene by SPME-GC/MS
P2 074 00 2015-07	Determination of methyl eugenol by SPME-GC/MS
14	Determination of residues, contaminants, food additives and substances by GC-MS/MS in wine, wine-based beverages, flavored drinks, beverages similar to wine, liqueurs, semi sparkling wine, sparkling wine, spirits, fruit juice, vinegar and other alcoholic beverages and their semi-finished products and raw materials for manufacturing**
P2 019 03 2015-08	Determination of anisoles in different products by SPME-GC/MS
P2 020 01 2010-02	Determination of phthalates by GC-MS/MS
P2 076 00 2015-09	Quantitative determination of plasticizers in spirits and other clear beverages by GC-MS/MS
15	Spectroscopic analyses of substances in wine, wine-based and wine-like beverages, spirits, vinegar and fruit juices
P1 017 00 2011-10	Determination of alcohol, sugar, total acidity, organic acids, pH and density by FTIR
16	Sensorial analyses of wine, wine-based and wine-like beverages, spirits, vinegar, beer and other liquids
P1 011 04 2015-10	Organoleptic test

17 Microscopical analyses of turbidities and other particles in wine, wine-based and wine-like beverages, spirits, vinegar, fruit juices, beer and other liquids

P3 001 02 Microscopical analyses of turbidities and other unknown
2012-02 particles

18 Determination of residues by ELISA in wine, wine-based and wine-like beverages, spirits, vinegar, fruit juices, beer and other liquids

P2 056 00 Determination of casein residues by ELISA in microtiter plate
2013-03 system by photometry

P2 057 00 Determination of whole egg powder residues by ELISA in
2013-03 microtiter plate system by photometry

P2 058 00 Determination of lysozyme residues by ELISA in microtiter plate
2013-03 system by photometry

19 Microbiological examinations in wine, wine-based and wine-like beverages, spirits, vinegar, fruit juices, beer and other liquids

P1 023 00 Determination of yeast (total count) in liquids by sterile
2013-09 analysis

20 Quantification of ingredients in alcoholic and nonalcoholic liquids, of water-soluble substances and of substances which are miscible with organic solvents

P2 066 00 Quantitative NMR spectroscopy of the ingredients of alcoholic
2014-11 liquids

P2 067 00 Quantitative NMR spectroscopy of the ingredients of non-
2014-11 alcoholic liquids

P2 068 00 Quantitative NMR spectroscopy water-soluble substances
2014-11

P2 069 00 Quantitative NMR spectroscopy of substances and liquids which
2014-11 are miscible with organic solvents

P2 070 00 Metabolomic evaluation of NMR spectra for sample
2014-11 differentiation

21 Gravimetric analysis of nicotine salts

DIN ISO 13276 Tobacco and tobacco products
2003-09 Determination of nicotine purity - Gravimetric method using silicotungstic acid (modification: screening of nicotine salts of oenology)

Abbreviations used:

ASU	official collection of analyses methods according to § 64 LFGB
FID	flame ionization detector
DIN	German institute for standardization
EN	European Standard
HPLC	high performance liquid chromatography
IEC	International Electrotechnical Commission
IC	ion chromatography
ICP-OES	inductively coupled plasma optical emission spectroscopy
ISO	International Organization for Standardization
LC	liquid chromatography
MS	mass spectrometry
PX XXX XX	particular methods of the conformity assessment institution
SPME	solid phase micro extraction