



ISSN 1004-8685
CN QK1864895

中国卫生检验杂志

ZHONGGUO WEISHENG JIANYAN ZAZHI

2019年1月 第29卷 第2期

Jan.2019 Vol.29 No.2

国家卫生和计划生育委员会主管
中华预防医学会主办

CHINESE
JOURNAL OF HEALTH
LABORATORY TECHNOLOGY

CJ
HLT

RCCSE 中国核心学术期刊
中国生物医学源期刊
美国化学文摘(CA)源期刊
中国学术期刊综合评价数据库源期刊

2

2019



中华预防医学会系列杂志
SERIAL JOURNAL OF CHINESE PREVENTIVE MEDICINE ASSOCIATION

中国卫生检验杂志

ZHONGGUO WEISHENG JIANYAN ZAZHI

半月刊 1991年创刊 第29卷 第2期 2019年1月25日出版

主管

中华人民共和国国家卫生和计划生育委员会
100044,北京市西城区西直门外南路1号

主办

中华预防医学会
100021,北京市朝阳区华威里25号5层

名誉总编

丛玉隆

社长

张绍武

总编

徐英春

总编助理

张辉

常务副社长

杨师

副社长

张甜 姜友珍

副总编 (排名按姓氏笔画排列)

沈立松 李永哲 李桂英 张克荣 应斌武
郁庆福 林丽开 姜晓峰 徐国宾 程伟

编辑部主任

杨锋

编辑

中国卫生检验杂志编委会

出版

中国卫生检验杂志社
450003 郑州市经一路12号2288信箱

编辑部电话

0371-65978342
0371-65968289(传真)

广告部电话

0371-65998851
15538110112

发行

国内发行:自办发行
国外发行:中国国际图书贸易总公司
(北京399信箱)
国外发行代号:M5752

中国标准连续出版物号

ISSN 1004-8685
CN 41-1192/R

广告发布登记证号

郑金水广登字[2018]005号

2019年版权归中国卫生检验杂志社所有

定价

每期38元

目次

论著

动态反应池—电感耦合等离子体质谱法测定自来水中11种非常规金属

元素 蒋慧,雷宁生,黎林 (129)

超高效液相色谱—串联质谱法测定奶茶中4种烷基酚类化合物

..... 林胜军,黄诚,卢丽明 (132)

固相萃取—超高效液相色谱—串联质谱法测定鸡肉中四环素类抗生素

的残留 李继革,方兰云,姚珊珊,等 (135)

叶酸 MTHFR C677T 基因多态性与妊娠早期亚临床甲状腺功能减退的

相关性研究 路娜,冉晓丹,王书杰,等 (140)

萝卜硫素对阿霉素急性肝损伤小鼠的保护作用及对 PPAR α 、NF- κ B 的

影响 纪倩,王琦,茹仁萍,等 (143)

化学测定方法

超高效液相色谱质谱联用技术快速检测中药钩藤中6种钩藤碱含量

..... 江夏娟,林崇良,蔡进章,等 (147)

全自动固相萃取—超高效液相色谱/串联质谱法测定水产品中9种微囊

藻毒素 朱文涛,邵国健,张鹏,等 (150)

本刊编委 (排名按姓氏笔画排列)

丁家华 仓公敖 方赤光 王 旻
王 哲 王大宁 王志玉 王京宇
王凯娟 王桐东 毋福海 冯晓燕
叶能权 毕永毅 刘玉龙 刘运德
刘秀梅 刘殿武 吕玉民 吕昌银
祁建城 任一平 孙长颖 孙成均
许春向 陈守建 何建国 何浙生
何晓青 李 蓉 李 磊 李明武
李晓虹 宋宏彬 吴清平 杨 元
张 蒙 张 曦 张贺秋 邹学贤
姜庆五 赵 卓 赵雁林 高永清
贾珍珍 栗文元 凌文华 栾 燕
徐东群 曹 佳 晁福寰 崔 巍
常风启 黄国伟 康 辉 康维钧
韩玉霞 韩学尧 曾现伟 窦志勇
溥 萍 阙 飒 廖百森 裴少军
裴晓方 谭晓东 熊 英 潘 慧
冀元棠 穆新林

Editorial Board Member (in Surname Stroke Order)

DING Jia - hua, CANG Gong - ao, FANG Chi -
guang, WANG Min, WANG Zhe, WANG Da -
ning, WANG Zhi - yu, WANG Jing - yu, WANG
Kai - juan, WANG Xu - dong, WU Fu - hai,
FENG Xiao - yan, YE Neng - quan, BI Yong -
yi, LIU Yu - long, LIU Yun - de, LIU Xiu - mei,
LIU Dian - wu, LV Yu - min, LV Chang - yin,
QI Jian - cheng, REN Yi - ping, SUN Chang -
hao, SUN Cheng - jun, XU Chun - xiang, CHEN
Shou - jian, HE Jian - guo, HE Zhe - sheng, HE
Xiao - qing, LI Rong, LI Lei, LI Ming - wu,
LI Xiao - hong, SONG Hong - bin, WU Qing -
ping, YANG Yuan, ZHANG Meng, ZHANG Xi,
ZHANG He - qiu, ZOU Xue - xian, JIANG Qing -
wu, ZHAO Zhuo, ZHAO Yan - lin, GAO Yong -
qing, JIA Zhen - zhen, LI Wen - yuan, LING
Wen - hua, LUAN Yan, XU Dong - qun, CAO
Jia, CHAO Fu - huan, CUI Wei, CHANG Feng -
qi, HUANG Guo - wei, KANG Hui, KANG Wei -
jun, HAN Yu - xia, HAN Xue - yao, ZENG
Xian - wei, DOU Zhi - yong, PU Ping, KAN Biao,
LIAO Bai - sen, PEI Shao - jun, PEI Xiao - fang,
TAN Xiao - dong, XIONG Ying, PAN Hui, JI
Yuan - tang, MU Xin - lin

网 址

www.zgwsjy.cn

投稿电子信箱

wsjyzz@126.com

印 刷

河北鑫兆源印刷有限公司

基于 $K_3[Fe(CN)_6]$ 选择性氧化自动永停滴定法同时测定胱氨酸和半胱

氨酸 白莹, 张小林 (155)

微波消解 - 电感耦合等离子体质谱法同时测定食品用纸制品中 8 种元素

的残留量 甘宁, 罗娜 (157)

电感耦合等离子体质谱法测定大气 PM2.5 中的 12 种元素

..... 洪月玲, 钱云霞, 齐斌 (160)

气相色谱 - 三重四极杆质谱联用法测定尿样中的碘化物

..... 代澎, 张欣, 王璟, 等 (163)

甲磺酸帕珠沙星滴眼液中抑菌剂含量的考察

..... 楼永军, 左丽丽 (166)

实验研究

血样存放温度对 HIV/AIDS 患者 CD4⁺、CD8⁺T 淋巴细胞测定结果的影响

..... 陈家图, 彭淑萍, 廖国东 (168)

微生物检测方法

下呼吸道分离病原菌种类及药敏分析 孙荷, 茅国锋 (171)

学校感染性腹泻疫情中诺如病毒的分子流行病学分析

..... 陈波, 翁正军, 陈莫娇, 等 (174)

沿海地区耐碳青霉烯类铜绿假单胞菌耐药基因分析和同源性研究	石庆新,於青峰,蔡莺莺,等	(176)
常见固有耐药细菌的感染分布及药敏分析	邱红美,陆建红,杨勇,等	(179)
手外科患者手术切口感染产 AmpC 酶革兰阴性杆菌耐药基因型检测与分析	程海荷,金海萍,边保华	(183)
呼吸道感染流感嗜血杆菌的流行病学特征与耐药性分析	陈琴琴,张金飞	(186)
2 种显微镜检查抗酸杆菌的方法学比较	郭如惠	(190)
2013 年 - 2017 年湖州市流感病毒分离鉴定结果分析	徐德顺,查赟峰,吴晓芳	(192)
2011 年 - 2016 年鲍曼不动杆菌分离情况及耐药变迁	刘旭东,苏芬	(196)

临床检验

慢性乙型肝炎患者血清肝纤维化指标水平及检测意义	封莉,吴敏娟,徐俊驰,等	(199)
急性缺血性脑卒中患者血清脂蛋白相关磷脂酶 A2、同型半胱氨酸的相关性及危险因素分析		
.....	黄朝任,邹光美,陆日秋,等	(202)
临床患者自身抗体阳性情况调查及输血对策分析	张敏,吴乾波,刘琴	(206)
316 例终止妊娠病例的细胞遗传学分析	徐雪琴,林小玲,周丽丽,等	(209)
肺腺癌患者外周血环状 RNA 差异表达谱研究	穆银玉,谢服役,徐国栋,等	(211)
首发精神分裂症患者的甲状腺激素及炎症因子水平检测及其与临床特征的关系	陈松,张江涛,梁雨	(215)
乳腺癌中凋亡细胞比率与雌激素受体、孕激素受体、人表皮生长因子 - 2 表达的相关性研究		
.....	张景臣,刘薇,毛大华	(218)

类风湿性关节炎患者血清胆红素水平的变化及临床意义	牟晓月,金都,陶海英	(221)
CD62p、CD63 及可溶性白细胞分化抗原 14 亚型水平与糖尿病足感染程度及预后关系研究		
.....	丁进龙,郁维博,姚亚波	(224)
冠心病患者血清胆红素水平与左心室肥厚的相关性研究	任诗佳,徐恩国,刘文华,等	(227)
肝素结合蛋白在急性盆腔炎诊疗中的应用价值	王帅	(230)
肝素结合蛋白对新生儿早期细菌感染性疾病诊断的参考价值分析	封丹,朱琼	(233)
干扰素 - γ 、人类白细胞抗原 - G、结核抗体联合检测在骨关节结核诊断中的临床应用	陈浩全,曾嫚妮	(236)

调查·监测

辽宁北部某地区生活饮用水源水污染贾第鞭毛虫和隐孢子虫情况调查	魏彤竹,于淼,张眉眉,等	(239)
2017 年青岛市食源性疾病主动监测细菌学结果分析	郭凯,刘晓琳,王伟栋	(242)
丽水地区儿童呼吸道病毒感染的流行病学调查分析	黄桂英,涂晓波,裴立红,等	(245)
2017 年郑州市食源性致病菌监测结果分析	戴蕾,蒋诗苑,赵瑞臻,等	(248)
鸡蛋炒面引起副溶血性弧菌食物中毒调查	刘马英,洪浩,王玮,等	(251)
2015 年 - 2017 年嘉兴市城区医疗机构消毒质量监测报告	高蕾,王恒辉,高文洁,等	(254)

责任编辑 杨锋

责任校对 刘迪

英文编辑 张蒙 田辉

CHINESE JOURNAL OF HEALTH LABORATORY TECHNOLOGY

Semimonthly Established in 1991, Volume 29 Number 2 January 25, 2019

Managed by

National Health and Family Planning Commission
of the People's Republic of China
No. 1, Xizhimen Wainan Road, Xicheng District, Beijing, 100044

Sponsored by

Chinese Preventive Medicine Association
Floor 5, No. 25 Huaweili, Chaoyang District, Beijing, 100021

Honorary Editor - in - chief

CONG Yu - long

President

ZHANG Shao - wu

Editor - in - chief

XU Ying - chun

Assistant of Chief Editor

ZHANG Hui

Executive Deputy President

YANG Shi

Deputy President

ZHANG Tian, JIANG You - zhen

Deputy Editor -in -chief (in Surname Stroke Order)

SHEN Li - song, LI Yong - zhe, LI Gui - ying,
ZHANG Ke - rong, YING Bin - wu, YU Qing -
fu, LIN Li - kai, JIANG Xiao - feng, XU Guo -
bin, CHENG Wei

Director of Editorial Department

YANG Feng

Edited by

Editorial Board of Chinese Journal of Health Labo-
ratory Technology

Published by

Editorial Department of Chinese Journal of Health
Laboratory Technology
Mailbox 2288, No. 12, Jingyi Road, Zhengzhou, 450003

Editorial office telephone

0371 - 65978342
0371 - 65968289 (Fax)

Advertising department telephone

0371 - 65998851
15538110112

Domestic Distributor

Self - publishing

Overseas Distributor

China International Book Trading Corporation
(P. O. Box 399, Beijing, China)
Code: M5752

Website

www. zgwsjy. cn

E - mail

wsjyzz@126. com

Standard Series Number

ISSN 1004 - 8685
CN 41 - 1192/R

Copyright 2019 by Editorial Department of
Chinese Journal of Health Laboratory Technology

Price

RMB ¥38

CONTENTS IN BRIEF

Original Articles

Determination of 11 unconventional elements in tap water by inductively
coupled plasma - mass spectrometry with dynamic reaction cell

..... JIANG Hui, LEI Ning - sheng, LI Lin (129)

Determination of four kinds of alkylphenols in milk tea by ultra - high per-
formance liquid chromatography - tandem mass spectrometry

..... LIN Sheng - jun, HUANG Cheng, LU Li - ming (132)

Determination of tetracycline antibiotics residues in chicken by solid - phase
extraction with ultra - high performance liquid chromatography - tandem
mass spectrometry

..... LI Ji - ge, FANG Lan - yun, YAO Shan - shan, *et al* (135)

Correlation study of *MTHFR C 677T* gene polymorphism in folic acid with
subclinical hypothyroidism in early pregnancy

..... LU Na, RAN Xiao - dan, WANG Shu - jie, *et al* (140)

Protective effect of sulforaphane on mice with acute liver injury induced by
adriamycin and its effect on PPAR α and NF - κ B

..... JI Qian, WANG Qi, RU Ren - ping, *et al* (143)

Chemical Detection Method

Rapid determination of six *Uncaria* alkaloids in *Uncaria Rhynchophylla* by
ultra performance liquid chromatography tandem mass spectrometry

..... JIANG Xia - juan, LIN Chong - liang, CAI Jin - zhang, *et al* (147)

Determination of 9 microcystins in aquatic products by automated solid phase extraction coupled with ultra performance liquid chromatography – tandem mass spectrometry ZHU Wen – tao, SHAO Guo – jian, ZHANG Peng, *et al* (150)

Determination of cysteine and cystine with automatic dead stop titration based on selective oxidation reaction promoted by $K_3[Fe(CN)_6]$ BAI Ying, ZHANG Xiao – lin (155)

Simultaneous determination of eight heavy metal elements in food packing paper by microwave digestion – ICP – MS GAN Ning, LUO Na (157)

Determination of 12 elements in atmospheric PM_{2.5} by inductively coupled plasma mass spectrometry HONG Yue – ling, QIAN Yun – xia, QI Bin (160)

Determination of iodide in urine by gas chromatography – triple quadrupole mass spectrometry DAI Peng, ZHANG Xin, WANG Jing, *et al* (163)

Quantitation detection of ethyl 4 – hydroxybenzoate in pazufloxacin mesilate eye drops LOU Yong – jun, ZUO Li – li (166)

Experimental Study

Effect of blood storage temperature on determination results of $CD4^+$, $CD8^+$ T lymphocyte in patients with HIV/AIDS CHEN Jia – tu, PENG Shu – ping, LIAO Guo – dong (168)

Microbe Detection Method

Analysis of species and drug sensitivity of pathogenic bacteria isolated from lower respiratory tract SUN He, MAO Guo – feng (171)

Molecular epidemiological analysis of norovirus in outbreaks of acute gastroenteritis in school CHEN Bo, WENG Zheng – jun, CHEN Mo – jiao, *et al* (174)

Drug resistance gene analysis and homology study of carbapenems resistant *Pseudomonas aeruginosa* in coastal region SHI Qing – xin, YU Qing – feng, CAI Ying – ying, *et al* (176)

Infection distribution and susceptibility analysis of common inherently resistant bacteria QIU Hong – mei, LU Jian – hong, YANG Yong, *et al* (179)

Test and analysis in patients with surgery incision infection AmpC enzyme producing Gram – negative bacilli resistant genotype
..... CHENG Hai – he, JIN Hai – ping, BIAN Bao – hua (183)

Epidemiological characteristics and drug resistance analysis of *H. influenzae* in respiratory tract infections
..... CHEN Qin – qin, ZHANG Jin – fei (186)

Comparison of two microscopical methods for examining acid resistant bacilli GUO Ru – hui (190)

Results analysis of isolation and identification of influenza viruses in Huzhou from 2013 to 2017
..... XU De – shun, ZHA Yun – feng, WU Xiao – fang (192)

Isolation and drug resistance of *Acinetobacter baumannii* from 2011 to 2016 LIU Xu – dong, SU Fen (196)

Clinical Laboratory Test

Serum liver fibrosis levels and detection value in patients with chronic hepatitis B
..... FENG Li, WU Min – juan, XU Jun – chi, *et al* (199)

Correlation of serum LP – PLA2 and Hcy with acute ischemic cerebral stroke and analysis of risk factors
..... HUANG Chao – ren, ZOU Guang – mei, LU Ri – qiu, *et al* (202)

Investigation on autoantibody positive situation in clinical patients and countermeasure analysis of blood transfusion
..... ZHANG Min, WU Qian – bo, LIU Qin (206)

Cytogenetic analysis of 316 cases with pregnancy termination XU Xue – qin, LIN Xiao – ling, ZHOU Li – li, *et al* (209)

Analysis of peripheral blood CircRNA expression profile in patients with lung adenocarcinoma
..... MU Yin – yu, XIE Fu – yi, XU Guo – dong, *et al* (211)

Detection of thyroid hormones and inflammatory factors in first – episode schizophrenia and its relationship with clinical characteristics
..... CHEN Song, ZHANG Jiang – tao, LIANG Yu (215)

Correlation of apoptotic cell ratio with ER, PR and HER – 2 in breast cancer tissue
..... ZHANG Jing – chen, LIU Wei, MAO Da – hua (218)

Changes and clinical significance of serum bilirubin level in rheumatoid arthritis
..... MOU Xiao – yue, JIN Du, TAO Hai – ying (221)

Study on the relationship of CD62p, CD63 and soluble leukocyte differentiation antigen 14 – subtype levels with infection degree and prognosis of diabetic foot disease DING Jin – long, YU Wei – bo, YAO Ya – bo (224)

Relationship of serum bilirubin with left ventricular hypertrophy in patients with coronary heart disease REN Shi – jia, XU En – guo, LIU Wen – hua, *et al* (227)

Application value of heparin binding protein in diagnosis and treatment of acute pelvic inflammatory disease WANG Shuai (230)

Reference value of heparin binding protein in diagnosis of neonatal infectious diseases FENG Dan, ZHU Qiong (233)

Clinical application of combined detection of interferon – γ , human leukocyte antigen – G and tuberculosis antibody in the diagnosis of bone and joint tuberculosis CHEN Hao – quan, ZENG Man – ni (236)

Investigation and Monitoring

Giardia and cryptosporidium contaminations in source water in a region of northern Liaoning WEI Tong – zhu, YU Miao, ZHANG Mei – mei, *et al* (239)

Analysis of surveillance results of bacterial foodborne disease in Qingdao, 2017 GUO Kai, LIU Xiao – lin, WANG Wei – dong (242)

Epidemiological investigation and analysis of respiratory virus infection in children in Lishui area HUANG Gui – ying, TU Xiao – bo, PEI Li – hong, *et al* (245)

Monitoring and analysis of food – borne pathogens in Zhengzhou City in 2017 DAI Lei, JIANG Shi – yuan, ZHAO Rui – zhen, *et al* (248)

Investigation of a food poisoning caused by *Vibrio parahaemolyticus* contaminated egg fried noodles LIU Ma – ying, HONG Hao, WANG Wei, *et al* (251)

Report on disinfection quality monitoring of medical institutions in urban area of Jiaxing during 2015 – 2017 GAO Lei, WANG Heng – hui, GAO Wen – jie, *et al* (254)

Editor in Charge YANG Feng

Responsibility of Proofreading LIU Di

English Editor ZHANG Meng TIAN Hui

一根都不能断

只有一双筷子才能吃好饭，扶贫扶志，激发脱贫内生动力。
一根是你脱贫的智力，一根是你脱贫的志气，脱贫路上一根都不能少。



扶贫扶志 助力脱贫
坚决打赢脱贫攻坚战