



ISSN 1004-8685

CN 41-1192/R

中国卫生检验杂志

ZHONGGUO WEISHENG JIANYAN ZAZHI

2016年8月 第26卷 第16期

Aug.2016 Vol.26 No.16

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

中国科技论文统计源期刊(中国科技核心期刊)

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

16

2016

ISSN 1004-8685



9 771004 868163

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 26 卷 第 16 期 2016 年 8 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,北京市朝阳区劲松东口华泰饭店

社长总编

张绍武

副社长

张 甜 姜友珍

副总编

郁庆福 李桂英 张克荣

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

出版日期

2016 年 8 月 25 日

发 行

国内发行:北京市邮政局
邮发代号:80 - 152
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

广告经营许可证号

4100004000124

2016 年版权归中国卫生检验杂志社所有

定 价

每期 21.50 元

目 次

论 著

- 超高效液相色谱 - 串联质谱法测定谷物中的杂色曲霉素
..... 刘少颖,黄希汇,樊继彩,等 (2281)
- 贝类中诺如病毒实时荧光定量 PCR 检测方法的建立及应用
..... 白頔,李孝军,王泽,等 (2285)
- 江西省流行性腮腺炎病毒基因特征分析
..... 肖芳,施勇,龚甜,等 (2288)
- 分散固相萃取 - 气相色谱 - 质谱法测定牛奶中多组分农药残留
..... 侯逸众,黄方取,胡浩军,等 (2291)

化学测定方法

- 电感耦合等离子体光谱法测定儿童头发中部分矿物质元素
..... 丁宇,曹云,周睿 (2296)
- 溶剂解吸 - 气相色谱法测定工作场所空气中 3 种丙烯酸酯类化合物
..... 严继东,侯逸众 (2298)
- 超高效液相色谱法同时测定胃内容物中 3 种乌头碱
..... 赵舰,程莉,唐晓琴,等 (2301)
- 高效液相色谱法测定口腔护理双氯芬酸含漱液中双氯芬酸的含量 ...
..... 程晶晶 (2304)
- 气体辅助液/液微萃取 - 气相色谱 - 三重四极杆质谱联用法测定生活
饮用水中的 15 种邻苯二甲酸酯 代澎,张晓妍 (2306)

本刊编委 (排名按笔画排列)

丁家华 仓公敖 方赤光 王哲
王大宁 王志玉 王京宇 王凯娟
王棚东 毋福海 冯晓燕 叶能权
毕永毅 刘秀梅 刘玉龙 刘运德
刘殿武 吕玉民 吕昌银 祁建城
任一平 孙长颢 孙成均 许春向
陈守建 何建国 何浙生 何晓青
李蓉 李磊 李晓虹 宋宏彬
吴清平 杨元 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 曹润武
晁福寰 崔巍 常凤启 黄国伟
康辉 康维钧 韩玉霞 曾现伟
窦志勇 溥萍 阚飒 廖百森
裴少军 裴晓芳 谭晓东 熊英
潘慧 冀元棠

Editorial Board Member

DING Jia-hua, CANG Gong-ao, FANG Chi-guang, 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 Xiu-mei, LIU Yu-long, LIU Yun-de, 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 Xiao-hong, SONG Hong-bin, WU Qing-ping, YANG Yuan, 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, CAO Run-wu, CHAO Fu-huan, CUI Wei, CHANG Feng-qi, HUANG Guo-wei, KANG Hui, KANG Wei-jun, HAN Yu-xia, 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

网 址

www.zgwsjy.cn

投稿电子信箱

wsjyzz@126.com

印 刷

鑫宏源印刷包装有限责任公司

来稿咨询电话

010-84030401

石墨炉原子吸收光谱法测定茶叶中的镍 陈国征,吴佳敏 (2310)

工作场所空气中金属加工液浓度测定方法的研究
..... 许兵,祁成,吴家兵,等 (2312)

顶空气相色谱法测定水果蔬菜中乙烯利 汪霞 (2316)

实验研究

葡萄糖调节蛋白 78 的表达、纯化及 ATP 酶活性实验 杨伟 (2319)

食品与药品检验

微波消解-石墨炉原子吸收法/原子荧光法测定食品中有害元素平台
研究 王永根,王剑波,朱小琼,等 (2323)

玉米等谷物中玉米赤霉烯酮的高效液相色谱测定法
..... 张婷,向仲朝 (2327)

微生物检测方法

镇江市 2012 年-2015 年 HIV 抗体不确定者检测结果分析
..... 沈俐,刘晓霞,傅更锋,等 (2329)

肠道病毒 IgM 抗体金标卡应用评价 曹敏娟,张英 (2332)

临床检验

重症急性胰腺炎患者血清 IL-17、IL-17R、IL-6、HMGB1 和 IL-10 水
平变化及临床意义 王丽芳,张朋伟,李云婷,等 (2334)

658 例血清半乳甘露聚糖试验检测结果分析
..... 甄拴平,王华,雷利强,等 (2336)

Th17/Treg 细胞在噬血细胞综合征患者外周血中的变化及意义
..... 杨军军,陈慧,邵美娟,等 (2338)

单核细胞 VCS 参数在肿瘤患者放化疗前后的变化及意义
..... 牛真珍,伊吉普,袁松波,等 (2341)

降钙素原、C - 反应蛋白、白细胞计数和中性粒细胞百分比在肺部感染性疾病早期诊断中的应用	李树林,顾畅 (2343)
红细胞分布宽度、中性粒细胞与淋巴细胞的比值、血小板和淋巴细胞的比值与活动性肺结核的关系	李小平 (2346)
降钙素原、C - 反应蛋白在细菌感染性肺炎诊断和预后中的价值	韩梅 (2349)
分子诊断与基因检测	
风疹病毒糖蛋白 2 - 核蛋白优势抗原表位原核可溶性融合表达与血清学诊断研究	孙卫国,杨栗坤,刘艳华,等 (2351)
监测分析	
丽水市一起学校暴发诺如病毒疫情的实验室基因检测分析	雷永良,王晓光,叶碧峰,等 (2355)
3 种手消毒剂对手部消毒效果的研究	项秀芹,米光丽,马玉凤,等 (2357)
2011 年 - 2015 年宁波地区人类免疫缺陷病毒感染状况分析	穆银玉,卢娜清,章琳,等 (2361)
长葛市麻疹、风疹抗体水平监测结果分析	郭伟超,曹淑娟,张小会 (2364)
周口市 2015 年食品中重金属监测结果分析	孙明,李弘,鹿尘 (2366)
2012 年 - 2015 年句容市生活饮用水监测结果分析	董淑江,尹艳,陈萍,等 (2369)
2008 年 - 2014 年临汾市尧都区农村饮水安全工程水质卫生监测报告	郭春英 (2373)
温州市区小型公共场所公共用品卫生监测分析	胡芸,陈喆,陈松林,等 (2378)
石家庄市 2004 年 - 2014 年无偿献血人群梅毒感染率曲线拟合及趋势预测	张静,王素玲,王艳彬,等 (2381)
调查报告	
2015 年杭州市市售食品铝含量的调查分析	薛鸣,龚立科,王姝婷,等 (2383)
广西地区男性精液质量与季节因素的关系分析	舒金辉,吴柱连,李学余,等 (2386)
杭州市售调味品中 6 种有毒元素污染状况调查与膳食暴露评估	樊继彩,龚立科,王姝婷,等 (2388)
2014 年鹤山市某塑料制管厂作业工人的血铅和 ZPP 水平调查	梁炼华,冯瑞文,古艳卿,等 (2392)
温州市 9 346 例孕前和孕早期女性巨细胞病毒与风疹病毒感染状况调查	胡晓秋,叶绿,王丹 (2395)

昌平区老年人慢性病患病及其危险因素调查分析	赵志忠	(2398)
市售冬枣中糖精钠和甜蜜素掺假的调查	顾建华,何鹏妍,陈倩倩,等	(2402)
水产品污染引起霍乱暴发疫情的检验和调查分析	章志建,潘虹,廖秀海	(2405)
2014 年 - 2015 年安陆市从业人员抗戊型肝炎 IgM 抗体分析	张守德,疏义林,万琴,等	(2407)
一起天那水引起的急性职业性中毒事故分析	冯洪杰,甘亚弟,吕玉奎	(2409)
细菌耐药性研究		
碳青霉烯类耐药大肠埃希菌出现后的大肠埃希菌耐药性监测	胡志军,唐吉斌,吴希静,等	(2412)
广西市售鸡肉金黄色葡萄球菌肠毒素基因分型及耐药性研究	诸葛石养,杜悦	(2416)
2 型糖尿病合并尿路感染患者临床特点与病原菌的耐药性探讨	陈玲,崔大伟	(2419)
教学与实验室管理		
我国独立医学实验室市场需求与发展策略讨论	陈志杭,梁欣如,应丽君,等	(2421)
综 述		
水中微量丙烯酰胺的检测方法	虞精明,陈纬,易炎忠	(2425)
祛斑美白类化妆品质量现状分析及监管建议	吴景,张凤兰,邢书霞,等	(2429)

CHINESE JOURNAL OF HEALTH LABORATORY TECHNOLOGY

Semimonthly Established in 1991, Volume 26 Number 16 August 25, 2016

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
Hua Thai Hotel, East Exit of Jinsong Road, Chaoyang District, Bei-
jing, 100021

Editor in Chief
ZHANG Shao - wu

Deputy Chairman
ZHANG Tian, JIANG You - zhen

Associate Editor in Chief
YU Qing - fu, LI Gui - ying, ZHANG Ke - rong

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

Publication Date
August 25, 2016

Domestic Distributor
Beijing Post Bureau
Code: 80 - 152

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

Advertising Management License
4100004000124

Copyright 2016 by Editorial Department of
Chinese Journal of Health Laboratory Technology

Price
RMB ¥21.50

CONTENTS IN BRIEF

Original Articles

Determination of sterigmatocystin in different grains by ultra - performance

liquid chromatography tandem mass spectrometry

..... LIU Shao - ying, HUANG Xi - hui, FAN Ji - cai, *et al* (2281)

Establishment and application of RT - PCR in the detection of norovirus in

shellfish BAI Jie, LI Xiao - jun, WANG Ze, *et al* (2285)

Genetic characteristics analysis of mumps virus in Jiangxi Province

..... XIAO Fang, SHI Yong, GONG Tian, *et al* (2288)

Determination of multicomponent pesticide residues in milk by dispersive - SPE

and GC - MS

..... HOU Yi - zhong, HUANG Fang - qu, HU Hao - jun, *et al* (2291)

Chemical Detection Method

Determination of some mineral elements in children's hair by ICP - OES ...

..... DING Yu, CAO Yun, ZHOU Rui (2296)

Determination of 3 kinds of acrylic esters in workplace air by solvent desorp-

tion - gas chromatography YAN Ji - dong, HOU Yi - zhong (2298)

Determination of aconitine, hypaconitine and mesaconitine in the gastric con-

tents by UPLC ZHAO Jian, CHENG Li, TANG Xiao - qin, *et al* (2301)

Determination of diclofenac content in collutorium by HPLC

..... CHENG Jing - jing (2304)

Determination of 15 phthalate esters in drinking water by gas chromatography

triple quadrupole mass spectrometry after air - assisted liquid - liquid micro-

extraction DAI Peng, ZHANG Xiao - yan (2306)

Determination of nickel in tea by graphite furnace atomic absorption spectrometry	CHEN Guo - zheng, WU Jia - min (2310)
Study on the method for concentration determination of metal working fluids in the workplace air	XU Bing, QI Cheng, WU Jia - bing, <i>et al</i> (2312)
Determination of ethephon in vegetables and fruits by head - space gas chromatography	WANG Xia (2316)
Experimental Study	
Expression, purification and ATPase activity test of GRP78	YANG Wei (2319)
Food and Drug Inspection	
Insight into the platform of analyzing harmful elements by microwave digestion - GFAAS/AFS	WANG Yong - gen, WANG Jian - bo, ZHU Xiao - qiong, <i>et al</i> (2323)
Determination of zearalenone in corn and other grain by high performance liquid chromatography	ZHANG Ting, XIANG Zhong - chao (2327)
Microbe Detection Method	
Analysis of indeterminate results of HIV antibodies in Zhenjiang during 2012 - 2015	SHEN Li, LIU Xiao - xia, FU Geng - feng, <i>et al</i> (2329)
Application and evaluation of Colloidal Gold Card in the test of enterovirus IgM antibody	CAO Min - juan, ZHANG Ying (2332)
Clinical Laboratory Test	
Levels changes and its clinical significance of serum IL - 17, IL - 17R, IL - 6, HMGB1 and IL - 10 in patients with severe acute pancreatitis	WANG Li - fang, ZHANG Peng - wei, LI Yun - ting, <i>et al</i> (2334)
Analysis of 658 cases of GM test results	ZHEN Shuan - ping, WANG Hua, LEI Li - qiang, <i>et al</i> (2336)
Change and significance of Th17/Treg cells in peripheral blood of patients with hemophagocytic syndrome	YANG Jun - jun, CHEN Hui, SHAO Mei - juan, <i>et al</i> (2338)
The variety of monocyte VCS parameters and their significance in tumor patients before and after radiotherapy and chemotherapy treatments	NIU Zhen - zhen, YI Ji - pu, YUAN Song - bo, <i>et al</i> (2341)
Application of procalcitonin, C - reactive protein, white blood cells count and the neutrophil cell percentage in the early diagnosis of pulmonary infectious diseases	LI Shu - lin, GU Chang (2343)
Correlation of red cell distribution width, neutrophil to lymphocyte ratio and platelet to lymphocyte ratio with active tuberculosis	LI Xiao - ping (2346)

Diagnosis and prognosis value of C – reactive protein and procalcitonin for bacteria infectious pneumonia	
.....	HAN Mei (2349)

Molecular Diagnosis and Gene Detection

Research on the soluble fusion expression and serological diagnosis of rubella virus glycoprotein 2 – nuclear protein dominant antigen epitope pronucleus	SUN Wei – guo, YANG Li – kun, LIU Yan – hua, <i>et al</i> (2351)
---	--

Monitoring and Analysis

Analysis of genetic testing of norovirus outbreak in a school of Lishui	
.....	LEI Yong – liang, WANG Xiao – guang, YE Bi – feng, <i>et al</i> (2355)
Research on the effect of three kinds of hand disinfectant	XIANG Xiu – qin, MI Guang – li, MA Yu – feng, <i>et al</i> (2357)
Analysis of HIV infection in Ningbo from 2011 to 2015	MU Yin – yu, LU Na – qing, ZHANG Lin, <i>et al</i> (2361)
Surveillance results and analysis of measles and rubella antibody levels in Changge	
.....	GUO Wei – chao, CAO Shu – juan, ZHANG Xiao – hui (2364)
Analysis of monitoring results of heavy metals in food in Zhoukou in 2015	SUN Ming, LI Hong, LU Chen (2366)
Monitoring results of drinking water quality in Jurong during 2012 – 2015	
.....	DONG Shu – jiang, YIN Yan, CHEN Ping, <i>et al</i> (2369)
Monitoring report of water hygiene on rural drinking water safety project during 2008 – 2014 in Yaodu district	
.....	GUO Chun – ying (2373)
Hygiene surveillance and analysis of public supplies in small public places in Wenzhou	
.....	HU Yun, CHEN Zhe, CHEN Song – lin, <i>et al</i> (2378)
Syphilis curve fitting and trend prediction of voluntary blood donors in Shijiazhuang from 2004 to 2014	
.....	ZHANG Jing, WANG Su – ling, WANG Yan – bin, <i>et al</i> (2381)

Investigation Report

Investigation and analysis on aluminum content of commercially available food in Hangzhou in 2015	
.....	XUE Ming, GONG Li – ke, WANG Shu – ting, <i>et al</i> (2383)
Study on the relationship between male semen quality and seasonal factors in Guangxi	
.....	SHU Jin – hui, WU Zhu – lian, LI Xue – yu, <i>et al</i> (2386)
Investigation on contamination of 6 toxic elements in flavoring and assessment on dietary exposure in Hangzhou	
.....	FAN Ji – cai, GONG Li – ke, WANG Shu – ting, <i>et al</i> (2388)
Surveillance of blood lead and blood zinc level in exposed workers in a plastic pipe factory in Heshan in 2014	
.....	LIANG Lian – hua, FENG Rui – wen, GU Yan – qing, <i>et al</i> (2392)

Investigation on cytomegalovirus and rubella virus infection in 9 346 cases during progestation and early pregnancy in Wenzhou	HU Xiao – qiu, YE Lv, WANG Dan (2395)
Research and analysis of the community elderly chronic disease and its risk factors in Changping District	ZHAO Zhi – zhong (2398)
Investigation of the adulteration of sodium saccharin and sodium cyclamate in winter jujube in market	GU Jian – hua, HE Peng – yan, CHEN Qian – qian, <i>et al</i> (2402)
Test and survey analysis of cholera outbreak for aquatic pollution ...	ZHANG Zhi – jian, PAN Hong, LIAO Xiu – hai (2405)
Anti – HEV IgM antibody analysis of workers in Anlu during 2014 – 2015	ZHANG Shou – de, SHU Yi – lin, WAN Qin, <i>et al</i> (2407)
Analysis of an acute occupational poisoning accident caused by thinner	FENG Hong – jie, GAN Ya – di, LV Yu – kui (2409)

Bacterial Resistance Research

Surveillance of bacterial resistance of <i>Escherichia coli</i> after the emergence of carbapenem – resistant <i>Escherichia coli</i>	HU Zhi – jun, TANG Ji – bin, WU Xi – jing, <i>et al</i> (2412)
Genotyping of enterotoxin gene and drug – resistance study of <i>Staphylococcus aureus</i> isolated from retail chicken in Guangxi Province	ZHUGE Shi – yang, DU Yue (2416)
Investigation of the clinical features and pathogens’ drug resistance in T2DMUTI patients	CHEN Ling, CUI Da – wei (2419)

美康生物

临床诊断检验系统解决方案供应商

MS-880B全自动生化分析仪

分立式恒速800T/H, 含ISE可达1200T/H

浙食药监械(准)字2014第2400326号

MS-480全自动生化分析仪

分立式恒速400T/H, 含ISE可达600T/H

浙食药监械(准)字2013第2400789号

□高精度分注泵, 确保准确上样

□特氟龙涂层加样针, 避免交叉污染

□集束式光路, 全息凹面平像场光栅后分光

SMART IV系列生化分析仪

适合基层慢性病诊断与管理的移动医疗系统

浙械注准20142400020

专用机型:

糖尿病、心脑血管疾病、肾脏疾病、感染性疾病、

肿瘤疾病筛查、HbA1c专用、CRP专用、PCT专用、HCY专用

多项生化校准品【浙食药监械(准)字2013第2400311号】

多项生化质控品【浙食药监械(准)字2013第2400305号】



2015美康生物重点产品推荐

抗环瓜氨酸肽抗体检测试剂盒(胶乳增强免疫比浊法)

注册证号: 浙械注准20142400057

触珠蛋白检测试剂盒(免疫比浊法)

注册证号: 浙械注准20142400040

纤维结合蛋白检测试剂盒(胶乳增强免疫比浊法)

注册证号: 浙械注准20142400059

降钙素原检测试剂盒(胶乳增强免疫比浊法)

注册证号: 浙食药监械(准)字2013第2400964号

25-羟基维生素D检测试剂盒(胶乳增强免疫比浊法)

注册证号: 浙食药监械(准)字2013第2400965号

胃蛋白酶原 I 检测试剂盒(胶乳增强免疫比浊法)

胃蛋白酶原 I 注册证号: 浙食药监械(准)字2013第2400953号

胃蛋白酶原 II 检测试剂盒(胶乳增强免疫比浊法)

胃蛋白酶原 II 注册证号: 浙食药监械(准)字2013第2400950号

甘胆酸检测试剂盒(胶乳增强免疫比浊法)

注册证号: 浙食药监械(准)字2013第2400952号

癌胚抗原检测试剂盒(胶乳增强免疫比浊法)

注册证号: 国食药监械(准)字2014第3401039号

☎ 技术服务热线

400-8574-710 800-9574-710

宁波美康生物科技股份有限公司
NINGBO MEDICALSYSTEM BIOTECHNOLOGY CO., LTD.

仪器生产及售后服务单位: 宁波美康盛德生物科技有限公司

地址: 宁波市鄞州区启明南路289号

生产许可证号: 浙食药监械生产许20140128号

试剂生产及售后服务单位: 宁波美康生物科技股份有限公司

地址: 宁波市鄞州区启明南路299号

生产许可证号: 浙食药监械生产许20130042号

电话: 0574-8822 3000 8822 3111 邮编: 315104

传真: 0574-8823 1889

E-mail: nbmk@nb-medicalsystem.com