



## Mohammad Reza Rezaei Kahkha

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**Tel & Fax:**054-3223290

**Addresses:** Department of Environmental Health Engineering, Faculty of Health, Zabol University of Medical Sciences, Zabol. Iran

**Academic Rank:** Assistant Professor

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### **Education**

B. SC: computer engineering, Shahib Bahonar University, 1999(incomplete)

B.SC: Chemistry, University of Sistan and Baluchestan, Zahedan, Iran, 2003.

MS.C: Analytical Chemistry, University of Sistan and Baluchestan, Zahedan, Iran, 2007.

Thesis Title: Application of Head Space Solvent Micro Extraction Technique for Determination of Volatile Component of Carum Copticum's Essential Oils.

Ph.D: Analytical Chemistry, University of Sistan and Baluchestan, Zahedan, Iran, 2016.

Thesis Title: Application of Modified Multi Walled Carbon Nanotubes on Solid Phase Extraction

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### **Language skills:**

English: Writing: Good; Reading: Good.

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### **Awards& Honors:**

1-The first researcher in faculty of health, Zabol university of medical sciences, 2015.

2- The third selected researcher in zabol university of medical sciences, 2015.

2- The first researcher in faculty of health, Zabol university of medical sciences, 2016.

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### **Experiences:**

Director of laboratories in school of pharmacy, Zabol University of medical sciences, 2007-2009.

Director of Laboratories in School of Health, Zabol University of Medical Sciences, 2009-now

Director of Academic Center for Education, Culture and Research in Zabol, Zabol University of medical sciences, 2010-now.

Director of cultural affairs, zabol university of medical sciences, 2014.

Educational Deputy, Faculty of Health, Zabol University of Medical Sciences, 2014-2017.

Head of College, Faculty of Health, Zabol University of medical sciences, 2017-now.

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### **Course Teaching:**

**General Chemistry**, for students of Occupational and Environmental health, for students of Pharmacy and students of laboratory sciences.

**General physics**, for students of general health.

**Analytical chemistry**, for students of occupational Health and Pharmacy.

**Environmental chemistry**, for students of environmental health.

**Instrumental analysis**, for students of pharmacy.

**Air pollutant analysis**, students of occupational Health.

**Occupational Toxicology**, (Experimental course), for students of occupational health.

**Principle of thermodynamic and heat transfer**, for students of environmental health.

**Environmental and Energy**, for students of environmental health.

**Water treatment**, for students of environmental health.

**Training course in the field**, for students of Environmental health and Occupational health.

**Chemistry and microbiology in water and wastewater**, for students of environmental health.

**Project**, for students of environmental health.

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## **Workshops:**

### **Attending the annual Workshop of Educational Strategies and Teaching Methods**

Zabol University of medical sciences.

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## **Grants:**

1- Determination of volatile and semi volatile components of withania coagulants.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

2-Survey in heavy metals concentration in water, agricultural soils and plants irrigated by  
wastewater of zabol.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

3- Evaluation of poly aromatic hydrocarbons in drinking water of zabol.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

4- Investigation of antimicrobial effects of tamarix leaves.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

5-A study in removal ability of heavy metals by powdered tamarix leaves.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

6-A survey in trihalomethanes concentration in distributed network of drinking water of zabol.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

7-A survey in Heavy metals concentration in distributed network of drinking water of zabol.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

8-Evaluation of removal ability of heavy metals using *Eisenia Fetida* earthworms.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

9- Evaluation of removal ability of heavy metals using *Eisenia Fetida* earthworms.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

10- Evaluation of removal ability of heavy metals using caparis fruits.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

11- Evaluation of removal ability of heavy metals using *C. collyntis* fruits.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

12-Green syntheses of gold nano particles using rose oils.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

13-Synthesis and application of granulated activated bentonite for removal of phosphate, nitrate and cyanide from aqueous solutions.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

14- Synthesis and application of magnetic bentonite nano composite for removal of antibiotics from aqueous solutions.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

15- Determination of heavy metals in food samples using metal organic frameworks.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

16- Removal of antibiotics from aqueous solutions using sonofenton method.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

17- Evaluation of soda in wet cookies of zabol.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

18-Determination of heavy metals in food samples of hen in Saravan.

Status: Running, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

19- Evaluation of nitrate and nitrite concentration in sausages product in zabol.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

20- EVALUATION OF HYPOCHLORITE SODIUM IN DISTRIBUTED MILK OF ZABOL

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

21- Evaluation of Ampicillin antibiotic in distributed milk of zabol.

Status: Running, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

22- Survey in heavy metals concentration in cosmetic products of zabol.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

23- Evaluation of treatment ability of parsley for heavy metals polluted soils.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

24-Evaluation of treatment ability of basil for heavy metals polluted soils.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

25- Evaluation Diazinon concentration in greenhouse products of zabol using modified carbon nanotubes.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

26- Evaluation of heavy metals concentration in distributed tobacco in zabol.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

27- Evaluation of fluoride concentration in distributed tea of zabol.

Status: Completed, Executors: rezaei kakhkha, MR, Sponser: Zabol University of Medical Sciences,  
Location: Zabol University of Medical Sciences.

28- Survey in organophosphorous pesticide in air and serum of greenhouse worker in sistán.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences, Location: Zabol University of Medical Sciences.

29- Evaluation of physicochemical properties of agricultural soils that irrigated with wastewaters of zabol.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences, Location: Zabol University of Medical Sciences.

30- Determination of Nicotine in wastewater.

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences, Location: Zabol University of Medical Sciences.

31- Detrmionation of tartrazine in distributed chocolate and poolaki in zabol .

Status: Completed, Executers: rezaei kahkha, MR, Sponser: Zabol University of Medical Sciences, Location: Zabol University of Medical Sciences.

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#### **Scientific Journals:**

Editorial board of Journal of Nano Drug Science, Zabol University of medical sciences.

Editorial board of quarterly journal of nanotechnology, Zabol University of medical sciences.

Editorial board of journal of faculty of medicine, zabol university of medical sciences

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#### **Conference papers:**

1-*Gas chromatographic-mass spectroscopic determination of volatile component of carum copticum using headspace solvent microextraction*, by: Kaykhaii, M; Khajeh, M; Rezaei Kahkha, MR. 16<sup>th</sup> conference of Iranian analytical chemistry, Hamedan, 2008.

2- *Evaluation of volatile components of carum copticum of Sistan*. By: Rezaei Kahkha, MR; Kaykhaii, M. The SecondConference of Medical Plants, Yasouj, 2010.

3-*Evaluation of antimicrobial effects of tamarix leaves*, by: Rezaei Kahkha, MR; Kaykhaii, M. 3<sup>th</sup> conference of Medical plants, Amol,2012.

- 4-*Removal of heavy metals using powdered leaves of tamarix*. 14<sup>th</sup> conference of Iranian Environmental Health, 2012.
- 5- *Removal of heavy metals from soil using Isenia Feotida earth worm*. 2<sup>th</sup> conference of bioremediation, Tehran, 2012.
- 6- *Removal of heavy metals using caparis fruits*, The First National Conference on Environment, Sustainable Environment and Health, Hamedan, 2014.
- 7- *Removal of heavy metals using citrullus colosynthis*, The Second National Conference on Environmental Research, Hamedan, 2014.
- 8-*Antimicrobial effects of etheric and alcoholic essence of citrullus colosynthis*, The Second National Conference of Medical Plants and Sustainable Agriculture, Hamedan, 2014.
- 9- *Evaluation of Heavy Metals Concentration in Agricultural Soils that Irrigated by Wastewater of Zabol*. The Second National Conference on Environmental Research, Hamedan, 2014.
- 10-*Evaluation of Heavy Metals Concentration in Plants that Irrigated by Wastewater of Zabol*, The Second National Conference of Farm Water Management, Karaj, 2015.
- 11- Determination of diazinon in environmental samples using modified multi-walled carbon nanotubes as pipette-tip solid phase extraction sorbent, 19<sup>th</sup> Iranian Chemistry Congress. 2017.
- 12-Evaluation of heavy metals in imported cosmetic products in Zabol, Conference of planning, protecting and Conserving Environment and Stable Development Registration, Hamedan, 2018.

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#### **Publication:**

- 1-Evaluation of heavy metals concentration in agricultural soils and plants irrigated by wastewater of zabol., Authors: Rezaei Kahkha, MR, Kaykhaii, M, Rezaei H. Quarterly Journal of Rostamineh, 2010.[In Persian]
- 2- Evaluation effective parameters on water quality of chahnimeh reservoirs, Authors: Kotd Mostafapour, F; Ebrahim Zadeh, GH; RezaeiKahkha, MR. Journal of Zabol University of Medical Sciences, 2014. [In Persian]
- 3- Photocatalytic Removal of Triethyl phosphate from Aqueous Solutions, Journal of Zabol University of Medical Sciences, 2015. [In Persian]
- 4-Removal of Reactive Red Dye from Aqueous Solutions Using Modified Ash of Citrullus Colosynthis, Authors: Rezaei Kahkha, MR, Piri, J. Journal of water and wastewater, 2015. [In Persian]

- 5-Evaluation of Heavy Metals Concentration in Vertical Profile of Chahnimeh. Authors: Rezaei Kahkha, MR; Kord e Mostafapour F, Journal of Zabol University of Medical Sciences, 2015. [In Persian]
- 6-Evaluation of Mycotoxin Pollution in Imported Rice of Zabol, Authors: Amanloo, S; Rezaei Kahkha, MR, Ramazani, AA; Mir, L, Journal of Jahrom university of Medical Sciences, 2014. [In Persian]
- 7- Survey of Heavy Metals Concentration (Fe·Ni·Cu·Zn·Pb) in Farmland Soils of Sistan Central Part, Authors: Javan Siamardi S, Rezaei Kahkha M R, Safaei Moghaddam A, Noori R. Journal of Environmental Health Engineering, 2015.[In Persian]
- 8-Antiaflatoxic effect of Carum Copticum Essential Oil, Authors: Rezaei Kahkha , MR; Amanloo, S; Kaykhaii, M. Environmental chemistry letters, Volume 12, Issue 1, pp 231–234, 2014.
- 9-Determination and extraction of zinc using ion imprinted polymer, Authors: Rezaei Kahkha , MR, Kaykhaii, M, International journal of applied and basic sciences, 2014.
- 10- Application of Response Surface Modeling and Central Composition Design for Removal of Lead from Aqueous Solution Using Prosopis Stephanian, Authors: Rezaei Kahkha , MR, Kaykhaii, M; Piri, J, International journal of applied and basic sciences, 2014.
- 11- Investigation of Vermicompost Fertilizer Effect on Chemical Composition of Essential Oil of Ziziphora tenuior in Weather Conditions of Kahnoojin Iran, Authors: Ganjali, A; Pourramezani-Harati, M; Kaykhaii, M; Rezaei Kahkha, MR, International Journal of Agriculture and Forestry, 2014.
- 12- Cadmium removal from aqueous solution by Citrullus Colosynthis powdered fruits, optimization of parameter by response surface, Authors: Rezaei Kahkha, MR, Kaykhaii, M; Ebrahim Zadeh, GH, Journal of Health Scope, 2015.
- 13- Flame atomic absorption spectrometric determination of trace amounts of silver in radiological waste samples after solid phase extraction using multi-walled carbon nano-tubes modified by sodium dodecyl sulfate, Authors: Rezaei Kahkha, MR, Kaykhaii, M. Journal of the Chilean Chemical Society, 2015.
- 14- Green syntheses of Gold nanoparticle Using Rosacea Extract, Authors: Rezaei Kahkha, MR; Rezaei Kahkha, H. International Journal of Applied and Basic Sciences, 2015.
- 15- Determination of mefenamic acid in urine and pharmaceutical samples by HPLC after pipette-tip solid phase microextraction using zinc sulfide modified carbon nanotubes, Authors: Rezaei Kahkha, MR, Kaykhaii, M; Shafee Afarani, M; Sepehri, Z. Analytical Methods, 2016.
- 16-Removal of Uranium (VI) from Aqueous Solution Using Modified Multiwalled Carbon Nanotubes: Kinetic, Isotherm and Thermodynamic Study, Authors: Rezaei Kahkha, MR; Kaykhaii, M; Pollution Research, 2016.
- 17- Removal of cyanide, phosphate, and nitrate from wastewater using granulated activated bentonite, Authors: Rezaei Kahkha, MR; Ebrahim zadeh, GH, Ranjbar, N, Advances in Bioresearch, 2017.



18-Determination of Diazinon in Environmental Samples Using Modified Multi-Walled Carbon Nanotubes as Pipette-Tip Solid Phase Extraction Sorbent. Authors: Mohammad Reza Rezaei Kahkha, Massoud Kaykhaii, Mahdi Shafee-Afarani, Batool Rezaei Kahkha. Biquarterly Iranian Journal of Analytical Chemistry. 2017

19-The MesoporousPorphyrinic Zirconium Metal-Organic Framework for Pipette-Tip Solid-Phase Extraction of Mercury 6 from Fish Samples Followed by Cold Vapor Atomic Absorption Spectrometric Determination, Authors: RezaeiKahkha, MR; Daliran, S; Oveisi, AR; Kaykhaii, M; Sepehri, Z. Food Analytical Methods, 2017.

20- Prediction of Water Level Fluctuations of Chahnimeh Reservoirs in Zabol Using ANN, ANFIS and Cuckoo Optimization Algorithm, Authors: Piri, J; RezaeiKahkha, MR, Iranian Journal of Health, Safety & Environment, 2017.

21-Examining Total Concentration and Sequential Extraction of Heavy Metals in Agriculture Soil and Wheat in Central Part of Sistan, Authors: RezaeiKahkha, MR; Javan, S; Bagheri, S; Piri, J., Polish journal of environmental studies, 2017.

22-Sonocatalysis Degradation of Methyl Orange Using Zinc Sulfide Carbon Nanotubes Nanocatalyst, Authors: RezaeiKahkha, MR; RezaeiKahkha, B; Faghihi-Zarandi, A. Advances in Environmental Technology, 2018.

23- Sn-adopted fullerene (C60) nanocge as acceptable catalyst for silicon monoxide oxidation, Authors: Razavi, R; Abrishamfar, M; RezaeiKahkha, MR., Bulletin of Material Science, 2018.

24-Halogen adopted nanocages as anode electrode of metal ion batteries:theorical investigation, Authors: RezaeiKahkha, MR, etal. Journal of molecular modeling, 2018

25- Determination of Carbamazepine in Urine and Water Samples using Amino-Functionalized Metal-Organic Framework as Sorbent, Authors: RezaeiKahkha, MR; Oveisi, AR; Kaykhaii, M; RezaeiKahkha, B, chemistry central journal, 2018.

26- Application of magnetic bentonite nanocomposite for removal of Amoxicillin From water samples Using Response Surface Methodology, Authors: RezaeiKahkha, MR; Miri, A, RezaeiKahkha, B; Khammar, AR, Submitted, 2018.

27-Ultrasound- electrospinning-assisted Fabrication and Evaluation of a novel membrane as Ultra sensor for copper ions Detection in aqueous environment,Authors:Gao, w; Haratipour, P; Kahkha, MRR; tahvili, A. Ultrasonics-sonochemistry, 2018.

28- Silver-choline chloride modified graphene oxide: Novel nanobioelectrochemicalsensor for celecoxib detection and CCD-RSM model. Authors: Parsaee, Z; Karachi, N; Abrishamifar, SM; RezaeiKahkha, MR; Razavi, R. Ultrasonics-sonochemistry, 2018.

29-Degradation of macrolide antibiotics via sono or photo coupled with Fenton methods in the presence of ZnS quantum dots decorated SnO<sub>2</sub> nanosheets. Authors: MojganHosseini, Mohammad Reza RezaeiKahkha, AliFakhri. Journal of Photochemistry and Photobiology B Biology, 2018.

30-Fast determination of bis phenol a in five spiked juice and drinking water using metal organic framework as sorbent. Authors: rezaei kahkha, MR; Kaykhaii, M; Miri, A; Saravani, H. Bulletin of chemical society of ethiopia, 2018.

31-Determination of nicotine in saliva, urine and wastewatersamples using tantalum metal organic framework pipettetip micro-solid phase extraction. Authors: MRR, kahkha; M. Kaykhaii;GH, Sargazi and B, Rezaei Kahkha. Analytical Methods, 2019.

32- Simultaneous removal of heavy metals from wastewater using modified sodium montmorillonite nanoclay. Authors: Mohammad Reza Rezaei Kahkha, Massoud Kaykhaii, Batool Rezaei Kahkha, Hamed Khosravi and Esmaeil Tohidlou. Analytical sciences, 2020.

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### **Membership:**

1- Member of American Chemical Society, (Since 2006).

2- Member of Iranian Environmental Health Engineering Society.( Since 2012).

3-Member Nano Technology Committee ., Zabol University of Medical Sciences, (2014- to be continued).

4-Member of Iranian Engineering Club, (since 2011)

5-Member of Cultural Council in Zabol University of Medical Sciences, (2012-to be continued).

6- Member of educational and research council of faculty of health and Zabol University Of Medical Sciences, (Since, 2014).

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### **Research Interests**

1-Trace Residual Analysis of Chemical Compounds Present in Environmental and Biological Samples

2. Sample Preparation for Environmental and Biological Media

3. Analytical Toxicology

4. EnvironmentalToxicology

5. Nanotechnology

6. Environmental Analytical Technology.