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An Overview of the most important Medicinal Plants used as Mouth Freshener

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Abstract.

Bad odor, is unpleasant odor that going out along the expiration from the nose or mouth. Halitosis or bad odor is a common and distressing symptom for patients and their families or freinds, and its effects on social, job and family relationships are difficult. Since the medicinal plants are used the treat variety of diseases, in this study, it was tried to identify and report medicinal plants that are used in Iran Ethnobotanical foe bad odor of the mouth. In this review, search for articles by keywords of Mouth, teeth, mouth freshener, Ethnobotanical, Iran and medicinal plants was carried out. Search from databasesincluding Scopus, ISC, SID, magiran, and a number of the other data base wer done. According to the documents for Iran ethnobotany, 13 important medicinal plants are used to eliminate bad odor. Medicinal plants such as frankincense, oregano, clove East fluffy clove, ephedra, parsley, rosemary and other are the most important medicinal plants to eliminate halitosis. Probably these medicinal plants have the essence and aromatic oil and effective medicinal materials to eliminate halitosis. **Keywords**: diseases of the mouth, halitosis, Ethnobotanical, medicinal plants

INTRODUCTION

In normal mode and under normal conditions, breath is odor-free and mouth should not have odor. Of course, naturally the mouth of anyone has particular smell that is called Human Odor [1]. Bad odor, is unpleasant odor that expiration going out from the nose or mouth [2]. The prevalence of bad odor sometimes has been reported up to fifty percent [3]. Halitosis or bad odor is a common and distressing symptom for patients and their families and its effects on social, job and family relationships is dificult [4]. Decay of proteins, mucin and peptides by microorganisms of surface of the tongue and dental plaque as well as anaerobic gram-negative bacteria can create volatile sulfur compounds that are responsible for bad odor [5,6]. Since the people with bad odor breathe from the mouth, undoubtedly dentists are of the first group that can help these people. Islam considers the mouth sweet odor the sign of good health of mouth [7]. Inflammation and halitosis is the main pathologic element for periodontal and oral mucosa. There are about 400 microorganisms in the mouth [8]. The smell which is emitted of mouth can be derived from the oral cavity or respiratory tract. The causes of oral malodor are reduced by closing the mouth, but breath smell is not decreased by non-oral causes with closing the mouth [9]. Mouth smell changes during the different days, even during different times of a day are vary, and the degree of mouth smell depends on the flow rate of saliva, food residues, accumulation and proliferation of bacteria and perhaps metabolic changes [10-12]. People of escaping from bad breath are encouraged to repeat in brushing, chewing gum, having chocolate, use freshener and mouthwashes and to keep a distance from others while talking [13]. Medicinal plants are a healthy and natural source of medicines [14-19]. These medicinal sources have had traditionally medicinal used [20-25]. Phytochemical analysis results of medicinal plants show that they contain active materials [26-29]. Medicinal plants have many medicinal properties due to the antioxidant materials and used for control of poisoning and medical and pharmaceutical errors by pharmaceutical companies and used for any disorders etc. [33-47]. Since the medicinal plants are used to treat a variety of diseases, in this study, it was tried to identify and report the medicinal plants in Iran used as ethnobotanical of bad breath.

METHODOLOGY

In this study, it was tried to identify and report medicinal plants that are used in Iran Ethnobotanical of bad odor. in this review, search for articles by keyword of Mouth, teeth, mouth freshenerEthnobotanical, Iran and medicinal plants was carried out.Search from databases, such as databases, included Scopus, ISC, SID, magiran, and a number of the other data base.

RESULTS

According to the documents for Iran ethnobotanical 13 important medicinal plants are used to eliminate bad odor. Medicinal plants such as frankincense, oregano, clove East fluffy clove, ephedra, parsley, rosemary and others are the most important medicinal plants to eliminate halitosis. Probably these medicinal plants have the essence and aromatic oils and are effective medicinal materials to eliminate halitosis. Additional information on this subject is specified in Table 1.

Sl.No	Scientific name	Family name	Persian name	Organs use	Therapeutic effect	Region
1	Boswellia papyrifera	Burseraceae	Kondor	Resin	Breath freshener	Khuzistan [48]
2	Nepeta persica Boiss.	Lamiaceae	Pouneh kouhi	Aerial parts	Breath freshener	Khuzistan [48]
3	Dianthus crinitus	Caryophyllaceae	Mikhak korki	Seed	Breath freshener	Sirjan [49]
4	Dianthus orientalis	Caryophyllaceae	Mikhak sharghi	Seed	Breath freshener	Sirjan [50]
5	Ephedra foliata	Ephedraceae	Efedra	Leaf and Stem	Breath freshener	East of Persian golf [51]
6	Biebersteinia Multifida	Biebersteiniaceae	Shirshirou	Leaf and Stem	Breath freshener	Kohgilouyeh [52]
7	Daphne mucronata		Khoushak	Leaf and Stem	Breath freshener	Kohgilouyeh [52]
8	Rhamnus persica	Rhamnaceae	Arzan	Fruit	Breath freshener	Kohgilouyeh [52]
9	Stachys pilifera	Lamiaceae	Oulileh	Leaf	Breath freshener	Kohgilouyeh [52]
10	Petroselinum crispum Mill	Apiaceae	Jafari	Aerial parts	Breath freshener	Mobarakeye isfahan [53]
1	Rosmarinus officinalis L	Lamiaceae	Rozmari	Leaf and Flowering shoot	Breath freshener	Mobarakeye isfahan [53]
12	Gailonia Aucheri	Rubiaceae	Khargol	Leaf and Flower	Breath freshener	Hormozgan [54]
13	Hyoscyamus muticus	Solanaceae	Bazralbanj	Seed	Breath freshener	Hormozgan [54]

Table 1: native medicinal plants to eliminate halitosis

DISCUSSION

Halitosis is an unpleasant odor that when some people speaking or breathing which can be a sign of systemic oral disorders and diseases. Poor oral hygiene and dental, disorders in saliva secretion or cessation of salivation and decayed teeth infections, dental abnormalities and not being row of the teeth in jaws and jams and being kept the foods between the teeth, as well as gum and tongue diseases, surgery of the mouth and teeth and ignoring the advice of a dentist, malignant lesions and cancer, diseases of the nose, upper respiratory tract, lung and gastrointestinal disorders and hormonal changes during puberty or pregnancy, diabetes and other systemic diseases, alcohol and tobacco products are the most important factors of production bad breath. These can be inconvenient for someone in terms of social. Eating fibrous fruits and vegetables and drinking water can help rosy mouth.

Eating fibrous vegetables and fruits is a good way to remove the mouth bacteria. Fruits such as apples also helps moisten the mouth. Oral rinses or mouthwashes are also effective products in preventing the mouth bad odor. The mouthwashes which have alcohol should not be used based because alcohol makes the mouth dry and worsens the problem. The plant remedies such as black and green teas due to having polyphenols can eliminate or reduce the sulfur compounds and decrease the oral bacteria [55]. The plants presented in this article are also rich in polyphenols which their actions are, at least in part, due to the present of these compounds. Most of polyphenols also have antimicrobial activities and enhance immune activites [56,57]. Therefore, other plants which have these agents [58-64], might benefit resolving this problem. These kinds of plants have a variety of other properties [65-70]. Medicinal plants can be used for the treatment of infectious and noninfectious [71-85]. Hence, the patients how have bad mouth odor may also get benefit in this regard.

REFERENCES

- [1] Bear D, Cobb P. Solitary psychosis. Br J Psych 1981; 138: 64-66.
- [2] Lindhe J: Clinical periodontology and implant dentistry. 5th Ed. Wiley-Blackwell, Munksgard 2003;Chap24:512-516.
- [3] Yaegaki K, Coil J: Examination, classification and treatment of halitosis clinical perspectives. J Canad Assoc 2000; 66:257-261.
- [4] Hoshmand B, Yousefi R, Khamvrdy G. Irsha compare the efficacy of two disinfectants and anti-plaque chlorhexidine 0/2% on the oral microbial flora. Journal of Islamic Dental Dentists 2006; Vol 18 (Issue No. 4): Pages 20-6
- [5] Fine DH, Furgang D, Sinatra K, et al. In vivo antimicrobial effectiveness of an essential oil-containing mouth rinse 12h after a single use and 14 days' use. J Clin Periodontol 2005 Apr; 32 (4): 335-40
- [6] Lang B, Filippi A. Halitosis-part 1: epidemiology and pathogenesis. Schweiz Monatsschr Zahnmed 2004: 114 (10): 1037- 50
- [7] Heshmati A, Baharvand M: Oral malodor (review). Undergraduate Thesis, Dental School, Azad University, 2000- 2001, [Persian].
- [8] Lang Np, Lindhe j. Clinical periodentology and ampler dentistry. 5th ed, Iowa (USA):Blackwell 2008;183-202.
- [9] Bogdoasarian Rs. Halitosis. Otolaryologic Med Clin North Am 1986; 19 (1): 111-7.
- [10] Block P, Houston G. Halitosis and fibroma. Ann Dent 1989; 46(1): 20-2.
- [11] Bullinger J. Disease of the Nose, throat, ear, head and neck. 13th ed. Philadelphia: Saunders. 1985.
- [12] Cranza. F A. Glick man's clinical periodontology. Philadelphia: Saunders. 6th ed; 1984
- [13] Scully C ,et al; Breath odor; etiopathogenesis; assessment and managment. Eru-j-oral -Sci; 1997 Aug :105(4):287-9.
- [14] Amiri A, Amiri A. Antioxidants and heart disease; current knowledge. Ann Res Antioxid. 2017;2(1):e03.
- [15] Rafieian-Kopaie M, Baradaran A. Plants antioxidants: From laboratory to clinic. J Nephropathol. 2013; 2(2): 152-153.

- [16] Nasri H. Help or hindrance; administration of herbal drugs for kidney diseases. Toxicol Persa. 2016;1(1):e04.
- [17] Hajian S. Positive effect of antioxidants on immune system. Immunopathol Persa. 2015;1(1):e02.
- [18] Nasri H, Abedi-Gheshlaghi Z, Rafieian-Kopaei M. Curcumin and kidney protection; current findings and new concepts. Acta Persica Pathophysiol. 2016; 1(1):e01.
- [19] Nasri H. Herbal drugs and new concepts on its use. J Prev Epidemiol. 2016; 1(1):e01.
- [20] Dehghan Shahreza F. Hibiscus esculentus and diabetes mellitus. J Nephropharmacol. 2016; 5(2):104-105.
- [21] Kafeshani M. Ginger, micro-inflammation and kidney disease. J Renal Endocrinol.2015; 1:e04.
- [22] Karimi A, Majlesi M, Rafieian-Kopaei M. Herbal versus synthetic drugs; beliefs and facts. J Nephropharmacol 2015; 4(1): 27-30.
- [23] Baradaran A. Herbal antioxidant to ameliorate vascular biology. Angiol Persica Acta. 2017;2(1):e01.
- [24] Rafieian-Kopaei M. Medicinal plants for renal injury prevention. J Renal Inj Prev. 2013 Jun 1; 2(2):63-5.
- [25] Gholamian-Dehkordi N, Luther T, Asadi-Samani M, Mahmoudian-Sani MR. An overview on natural antioxidants for oxidative stress reduction in cancers; a systematic review. Immunopathol Persa. 2017;3(2):e12.
- [26] Nasri H. Silymarin and its properties; a nephrology viewpoint. J Renal Endocrinol. 2015;1(1):e09.
- [27] Dehghan Shahreza F. Kelussia odoratissima Mozaffarian and dyslipidemia. J Nephropharmacol. 2017;6(1):13-14.
- [28] Bahmani M, Asadi-Samani M. A short look to the most important medicinal plants effective on wound healing. J Inj Inflamm.2016;1(2):e07.
- [29] Baradaran A. Herbal antioxidant to ameliorate vascular biology. Angiol Persica Acta. 2017;2(1):e01.
- [30] Rafieian-Kopaei M. Medicinal plants for renal injury prevention. J Renal Inj Prev. 2013 Jun 1; 2(2):63-5.
- [31] Baharvand-Ahmadi B, Asadi-Samani M. Medicinal plants and treatment of hypertension; evidence from Iran. J Nephropharmacol. 2017;6(1):3-8.
- [32] Dehghan Shahreza F. Oxidative stress, free radicals, kidney disease and plant antioxidants. Immunopathol Persa. 2017;3(2):e11.
- [33] Rouhi-Boroujeni H, Heidarian E, Rouhi-Boroujeni H, Deris F, Rafieian-Kopaei M. Medicinal Plants with multiple effects on cardiovascular diseases: a systematic review. Curr Pharm Des. 2017; 23(7): 999 – 1015.
- [34] Sharafati-Chaleshtori R, Shirzad H, Rafieian-Kopaei M, Soltani A. Melatonin and human mitochondrial diseases. J Res Med Sci 2016;21:138.
- [35] Rafieian-Kopaei M, Shahinfard N, Rouhi-Boroujeni H, Gharipour M, Darvishzadeh-Boroujeni P. Effects of Ferulago angulata extract on serum lipids and lipid peroxidation. Evidence-Based Complementary and Alternative Medicine; 2014 (2014), Article ID 680856, 4 pages http://dx.doi.org/10.1155/2014/680856
- [36] Asadi-Samani M, Rafieian-Kopaei M, and Azimi N. Gundelia: A systematic review of medicinal and molecular perspective. Pak J Biol Sci. 2013; 16: 1238-47.
- [37] Bahmani M, Banihabib E Rafieian-Kopaei M, Gholami-Ahangaran M. Comparison of disinfection activities of nicotine with copper sulphate in water containing limnatis nilotica. Kafkas Univ Vet Fak Derg2015; 21 (1): 9-11
- [38] Rezvanirad A, Mardani M, Shirzad H, Ahmadzadeh SM, Asgary S, Naimi A, Mahmoudi GHA. Curcuma longa: A review of therapeutic effects in traditional and modern medical references. Journal of Chemical and Pharmaceutical Sciences 2016; 9 (4): 3438-3448.
- [39] Ebrahimie M, Bahmani M, Shirzad H, Rafieian-Kopaei M, Saki K. A review study on the effect of iranian herbal medicines on opioid withdrawal syndrome. J Evid Based Complementary Altern Med. 2015 Oct;20(4):302-9.
- [40] Mehralian G, Nazari JA, Zarei L, Rasekh HR. The effects of corporate social responsibility on organizational performance in the Iranian pharmaceutical industry: The mediating role of TQM. Journal of Cleaner Production 2016; 135: 689-698.
- [41] Mahmoudi GHA, Astaraki P, Mohtashami AZ, Ahadi M. Nacetylcysteine overdose after acetaminophen poisoning. International Medical Case Reports Journal 2015; 8; A13: 65-69
- [42] Mahmoudi GA, Astaraki P, Nasiri M, Tarrahi MJ, Masoudi R. Evaluation of medical error status in various wards of Shohadaye

Ashayer Hospital, Khorramabad, Iran. Journal of Global Pharma Technology 2016; 10 (8): 27-31.

- [43] Delfani S, Mohammadrezaei-Khorramabadi R, Ghamari S, Boroujeni R.K, Khodabandeloo N, Khorzoughi MG, Shahsavari S. Systematic review for phytotherapy in Streptococcus Mutans. Journal of Pharmaceutical Sciences and Research 2017; 9 (5): 552-561.
- [44] Rafieian-Kopaei M, Asgary S, Adelnia A, Setorki M, Khazaei M, Kazemi S, Shamsi F. The effects of cornelian cherry on atherosclerosis and atherogenic factors in hypercholesterolemic rabbits. J Med Plants Res. 2011; 5(13): 2670-2676.
- [45] Baharvand-Ahmadi B, Bahmani M, Tajeddini P, Naghdi N, Rafieian-Kopaei M. An ethno-medicinal study of medicinal plants used for the treatment of diabetes. J Nephropathol. 2016; 5(1):44-50.
- [46] Talazadeh F, Mayahi M. Immune response of broiler chickens supplemented with pediatric cough syrup including thyme extract in drinking water against influenza vaccine. J Herbmed Pharmacol. 2017;6(1):33-36.
- [47] Tavakolli N, Ghanadian M, Asghari Gh, Sadraei H, Asgari-Borjlou1 N,, Tabakhian M. Development of a validated HPLC method for determination of an active component in Pycnocycla spinosa and tablets prepared from its extract. J Herbmed Pharmacol. 2017;6(1):37-42.
- [48] Khodayari H, Amani SH and Amiri H. Ethnobotanical Medicinal herbs North East Province. Ecophytochemistry Journal of Medicinal Plants 2014; 4; 8(2): 12-26.
- [49] Khajoei Nasab F, Khosravi AR. Ethnobotanical study of medicinal plants of Sirjan in Kerman Province, Iran. J Ethnopharmacol 2014;154:190-197.
- [50] Iranmanesh M, najafi SH and Yousefi M. Study of Ethno Botany Medicinal Plants of Sistan. J Herbal Drugs 2010; 2; 61-68.
- [51] Dolatkhhi M amd Nabipour I. Ethnobotanical study of medicinal of plants of northeast of Persian gulf. J Med Plants 2014; 50; 13(2): 129-143.
- [52] Mosaddegh M, Naghibi F, Moazzeni H, Pirani A, Esmaeili S. Ethnobotanical survey of herbal remedies traditionally used in Kohghiluyeh va Boyer Ahmad province of Iran. J Ethnopharmacol 2012;141:80-95.
- [53] Mardaninejad S, Janghorban M, Vazirpour M. Collection and identification of medicinal plants used by the indigenous people of Mobarakeh (Isfahan), southwestern Iran. J Herb Drugs 2013;4:23-32.
- [54] Naghibi F, Esmaeili S, Malekmohammadi M, Hassanpour A, Mosaddegh M. Ethnobotanical survey of medicinal plants used traditionally in two villages of Hamedan, Iran. Avicenna Journal of Phytomedicine 2014; 1(3): 7-14.
- [55] Katz H. How to stop and prevent bad breath. http://www.therabreath.com/how-to-stop-prevent-bad-breath.html. Available at:18.5.2017.
- [56] Gupta A, Chaphalkar SR. Anti-inflammatory and anti-microbial activities of aqueous leaves extract of Butea frondosa. J Herbmed Pharmacol. 2016;5(2):85-88.
- [57] Gupta A, Shaikh AC, Chaphalkar SR. Aqueous extract of Calamus rotang as a novel immunoadjuvant enhances both humoral and cell mediated immune response. J Herbmed Pharmacol. 2017;6(1):43-48.
- [58] Azadmehr A, Hajiaghaee R, Afshari A, Amirghofran Z, Refieian-Kopaei M, yousofi H., Darani and Hedayatollah Shirzad. Evaluation of in vivo immune response activity and in vitro anti-cancer effect by Scrophularia megalantha. J Med Plants Res. 2011; 5(11): 2365– 2368.
- [59] Akhlaghi M, Shanian Gh, Rafieian-Koupaei M, Parvin N, Saadat M, Akhlaghi M. Citrus aurantium Blossom and Preoperative Anxiety. Revista Brasileira de Anestesiologia 2011; 61(6):702-712.
- [60] Bahmani M, Sarrafchi A, Shirzad H, Rafieian-Kopaei M. Autism: Pathophysiology and promising herbal remedies. Curr Pharm Des. 2016; 22(3):277–285. DOI: 10.2174/1381612822666151112151529
- [61] Mirhosseini M, Baradaran A, Rafieian-Kopaei M. Anethum graveolens and hyperlipidemia: A randomized clinical trial. J Res Med Sci 2014;19:758-61
- [62] Madihi Y, Merrikhi A, Baradaran A, Rafieian-kopaei M, Shahinfard N, Ansari R, Shirzad H, Mesripour A. Impact of sumac on postprandial high-fat oxidative stress. Pak J Med Sci. 2013; 29 (1): 340-345.
- [63] Rafieian-Kopaie M, Baradaran A. Plants antioxidants: From laboratory to clinic. J Nephropathol. 2013; 2(2): 152-153.

- [64] Rafieian-Kopaei M, Baradaran A, Rafieian M. Oxidative stress and the paradoxical effects of antioxidants. J Res Med Sci. 2013; 18(7): 628.
- [65] Baradaran A, Nasri H, Nematbakhsh M, Rafieian-Kopaei M. Antioxidant activity and preventive effect of aqueous leaf extract of Aloe Vera on gentamicin-induced nephrotoxicity in male Wistar rats. Clinica Terapeutica. 2014;165(1):7-11.
- [66] Ghaed F, Rafieian-Kopaei M, Nematbakhsh M, Baradaran A, Nasri H. Ameliorative effects of metformin on renal histologic and biochemical alterations of gentamicin-induced renal toxicity in Wistar rats. J Res Med Sci. 2012; 17 (7): 621-625.
- [67] Rafieian-Kopaei M, Baradaran A, Merrikhi A, Nematbakhsh M, Madihi Y, Nasri H. Efficacy of Co-Administration of garlic extract and metformin for prevention of gentamicin-renal toxicity in wistar rats: A biochemical study. International Journal of Preventive Medicine. 2013;4(3):258-64.
- [68] Nasri H, Nematbakhsh M, Rafieian-Kopaei M. Ethanolic extract of garlic for attenuation of gentamicin-induced nephrotoxicity in Wistar rats. Iran J Kidney Dis. 2013 Sep;7(5):376-82.
- [69] Shirzad H, Taji F, Rafieian-Kopaei M. Correlation between antioxidant activity of garlic extracts and WEHI-164 fibrosarcoma tumor growth in BALB/c mice. J Med Food. 2011 Sep; 14(9):969-74.
- [70] Heidarian E, Rafieian-Kopaei M. Protective effect of artichoke (Cynara scolymus) leaf extract against lead toxicity in rat. Pharm Biol. 2013 Sep;51(9):1104-9.
- [71] Zarei L, Naji-Haddadi S, Pourjabali M, Naghdi N, Tasbih-Forosh M, Shahsavari S. Systematic Review of Anti-Rheumatic Medicinal Plants: An Overview of the Effectiveness of Articular Tissues and Joint Pain Associated with Rheumatoid Arthritis. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 547-551.
- [72] Pourjabali M, Mohammadrezaei-Khorramabadi R, Abbaszadeh S, Naghdi N, Naji-Haddadi S, Bahmani F. Medicinal Plants Used For Hypertension. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 537-541.
- [73] Karimi M, Naghdi N, Naji-Haddadi S, Bahmani F. Medicinal Plants Used For Kidney Pain. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 542-546.
- [74] Delfani S, Mohammadrezaei-Khorramabadi R, Ghamari S, Khadivi-Boroujeni R, Khodabandeloo N, Ghadirali Khorzoughi M, Shahsavari S. Systematic Review for Phytotherapy in Streptococcus Mutans. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 552-561.
- [75] Delfani S, Mohammadrezaei-Khorramabadi R, Abbaszadeh S, Naghdi N, Shahsavari S. Phytotherapy for Streptococcus pyogenes. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 513-526.

- [76] Zarei L, Pourjabali M, Naghdi N, Naji-Haddadi S, Bahmani E. A Systematic Review of the Most Important Medicinal Plants Native to Iran Effective on Testicular Morphology and Hormonal Testicular Function. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 562-567.
- [77] Baharvand-Ahmadi B, Bahmani M, Naghdi N, Saki K, Baharvand-Ahmadi S, Rafieian-Kopaei, M. Review on phytochemistry, therapeutic and pharmacological effects of myrtus (Myrtus communis) Der Pharmacia Lettre 2015;7 (11):160-165.
- [78] Bahmani, M., Rafieian-Kopaei, M. Medicinal plants and secondary metabolites for leech control Asian Pacific Journal of Tropical Disease 2014; 4 (4): 315-316.
- [79] Delfan, B., Kazemeini, H., Bahmani, M. Identifying Effective Medicinal Plants for Cold in Lorestan Province, West of Iran. Journal of Evidence-Based Complementary and Alternative Medicine 2015; 20 (3): 173 179.
- [80] Baharvand-Ahmadi, B., Bahmani, M., Zargaran, A., Eftekhari, Z., Saki, K., Baharvand-Ahmadi, S., Rafieian-Kopaei, M. Ruta graveolens plant: A plant with a range of high therapeutic effect called cardiac plant. Der Pharmacia Lettre2015; 7 (11):172-173.
- [81] Asadi SY, Parsaei P, Karimi M, Ezzati S, Zamiri A, Mohammadizadeh F, Rafieian-Kopaei M. Effect of green tea (Camellia sinensis) extract on healing process of surgical wounds in rat. Int J Surg. 2013;11(4):332-7. doi: 10.1016/j.ijsu.2013.02.014. Epub 2013 Feb 28.
- [82] Asadi-Samani M, Kafash-Farkhad N, Azimi N, Fasihi A, Alinia-Ahandani E, Rafieian-Kopaei M. Medicinal plants with hepatoprotective activity in Iranian folk medicine. Asian Pacific Journal of Tropical Biomedicine. 2015;5(2):146-57.
- [83] Bahmani M, Tajeddini P, Ezatpour B, Rafieian-Kopaei M, Naghdi N, Asadi-Samani M. Ethenobothanical study of medicinal plants against parasites detected in Shiraz, southern part of Iran. Der Pharmacia Lettre. 2016;8(1):153-60.
- [84] Parsaei P, Bahmani M, Naghdi N, Asadi-Samani M, Rafieian-Kopaei MM, Boroujeni S. Shigellosis phytotherapy: A review of the most important native medicinal plants in Iran effective on Shigella. Der Pharmacia Lettre. 2016;8(2):249-55.
- [85] Mohsenzadeh A, Ahmadipour S, Ahmadipour S, Asadi-Samani M. Iran's medicinal plants effective on fever in children: A review. Der Pharmacia Lettre. 2016;8(1):129-34.