

INTERNATIONAL JOURNAL OF UNIVERSAL PHARMACY AND BIO SCIENCES

IMPACT FACTOR 4.018***

ICV 6.16***

Pharmaceutical Sciences

REVIEW

ARTICLE!!!

COW URINE (*GOMUTRA*): RECENT ADVANCEMENT IN MULTIDIMENSIONAL PURPOSE WITH ITS SIGNIFICANCE AND FUTURE PROSPECTIVE

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KEYWORDS:

Cow (Gaumata), Cow
urine (Gomutra),

Panchagavya, Disease.

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ABSTRACT

Cow (*Bos indicus*) is called as Mother of all or 'Gaumata', most appreciated animal in all veda and worshipped as 'Kamdhenu' who accomplishes all desires. There are various classical texts (*Sushruta Samhita, Bhavprakash, Chakra Samhita and Bhagbhat Gita*) in which it has been explained with their significant value. Cow urine (Sanskrit: *Gomutra*) has significant and a inimitable place in Ayurveda which has been explained in '*Sushrita Samhita*' and '*Asthanga Sangraha*' to be most effective product having great therapeutic importance. As per several literatures, "*Panchagavya*" having spiritual and medicinal importance in all over world are used as single or in combination with herbal or minerals against various diseases or health problems, which are essentially act as antimicrobial activity. It is also predictable as "*Amrita*" (beverages of immortality) the nectar of God or as 'water of life' and drinking practiced for many centuries. In the recent researches, cow urine exploit the enzymatic activity which indicated the natural source of nutrients and enzymes that are significant for cancer and other many diseases. It also concluded that, it is also effective if it is given with the combination of other system of medicines like homeopathic medicines, allopathic medicines, etc. Recently there are two patents (patent 6410059 and patent 7235262) are approved as it is indicated that there will be a great and valuable medicines and cluster of health benefits for several diseases in coming days.

INTRODUCTION:

Cow (*Bos indicus*) is called as Mother of all or '*Gaumata*', most appreciated animal in all veda and worshipped as '*Kamdhenu*' who accomplishes all desires. "*Panchagavya*" composition of five components together containing cow's milk (*Godugdha*), curd (*Godadhi*), ghee (*Goghrit*), urine (*Gomutra*) and dung (*Gomaya*), is the main ingredients of several ayurvedic preparations and also employed to women after delivers a baby are known as '*Cowpathy*' or '*Panchgavya therapy*'. As per several literatures, "*Panchagavya*" having spiritual and medicinal importance in all over world are used as single or in combination with herbal or minerals against various diseases or health problems, which are essentially act as antimicrobial activity.

There are various classical texts (Sushrut Samhita, Bhavprakash, Chakra Samhita and Bhagbhat Gita) in which it has been explained with their significant value. Cow urine (Sanskrit: *Gomutra*) has significant and a inimitable place in Ayurveda which has been explained in '*Sushrita Samhita*' and '*Asthanga Sangraha*' to be most effective product having great therapeutic importance. It is also predictable as "*Amrita*" (beverages of immortality) the nectar of God or as '*water of life*' and drinking practiced for many centuries. From the studies of several literatures, cow urine is the significant remedy or used for the treatment of various diseases like allergies, tuberculosis, ulcer, diabetes, asthma, flu, cancer, colds, chicken pox, leprosy, rheumatoid arthritis, heart diseases, anti-poisonous (*Vishaghna*), aging, leucorrhoea, piles, AIDS, isinophilia, phlegm, dismonerrhoea, headache, skin infections, liver disorder, kidney diseases, arthritis, chemical intoxication and several bacterial/viral infections which is having low cost with limited adverse reaction as compared to modern medicine. In Gujrat there are several agencies of cow urine preparations which has been advertising and marketing from multiple outlets as freshed and sterilized products having prices ranging from Rs. 20 to Rs. 30 per bottle.^[1,2,3]



Figure 1: Cow urine (Gomutra)

Cow urine has been approved by US, (Patents No. 6,896,907 and 6,410,059) as medicinal properties; antibiotic, anticancer, bioenhancer and antifungal properties. In the recent researches, cow urine exploit the enzymatic activity which indicated the natural source of nutrients and enzymes that are significant for cancer and other many diseases.

According to Mythological belief, in the ancient text (“*Dammar Tantra*” which is 5000 old document linked to Vedas) ‘Significance of Cow Urine (*Gomutra*) Therapy’ was narrated by the Lord Shiva to Mother Parvati which is referred as “*Shivambu*” (Auto urine) called as water of Shiva which is an ancient therapy.^[4]

Table 1: Properties of Cow Urine (Gomutra)^[5]

S. No.	Texts	Properties
1	Sushruta Samhita sutra sthan 45/220-221	Laghu (easily digestible), Ushanavirya (hot in potency), Kathu Rasa (pungent), Tikshna (penetrating), Medhya (improves intellects), Agnidipaka (kindles digestion), Kshar Guna (alkaline properties) that reduces Vata and Kapha.
2	Charak Samhita sutra sthan 1/102	Madhur rasa (sweet) that reduces Vata, Pitta, and Kapha
3	Astang Samgraha sutra sthan 6/141-143	Rukshaguna, Kathu rasa, Ushnavirya, Lavanaanurasa that increases Pitta.

Specific gravity: 1.025-1.045

pH: 7.4-8.4 (Seasonal variations)

Composition of Cow Urine ^[6]

- Water: 95%
- Urea: 2.5%
- Enzymes, Minerals, Hormones, Salts: 2.5%
- Urine should not possess glucose, protein and haemoglobin in healthy cows, has volume about 17-45 ml/kg/day.

Table 2: Important Elements of Healthy Cow Urine

S. No.	Constituents	Ranges
1	Urea Nitrogen	23-28 ml/kg/day
2	Ammonia Nitrogen	1-1.7 ml/kg/day
3	Total Nitrogen	40-45 ml/kg/day
4	Allatonin	20-60 ml/kg/day
5	Magnesium	3.7 mg/kg/day
6	Sulphate	3-5 mg/kg/day
7	Calcium	0.1-1.4 ml/kg/day
8	Uric acid	1-4 mg/kg/day
9	Chloride	0.1-1.1 mmol/kg/day
10	Potassium	0.08-0.15 mmol/kg/day
11	Creatinine	15-20 mg/kg/day
12	Leucocyte	<15 micro lt.

Table 3: Other Valuable Ingredients of Healthy Cow Urine

S. No.	Ingredients	Functions
1	Aurum hydroxide	Act as antimicrobial, antidote and enhance immunity
2	Colony Stimulating factor	Essential for cell division and multiplication
3	Gonadotropin	Stimulate sperm production and menstrual cycle
4	Creatinine	Act as an antimicrobial
5	Anticancer molecules	Inhibits proliferation of carcinogenic cells
6	Enzymeurokinase	Essential for dissolving the blood clot, heart diseases and enhance in circulation of blood
7	Erythropoietin Stimulating factor	Essential for synthesis of Red Blood Cells

Table 4: Enzymes and others components contain in cow urine^[6]

S. No.	Components	Quantity
1	Lactate-Dehydrogenase	21.780 unit/lt
2	Acid Phosphatase	456.620 XAunit
3	Alkaline Phosphatase	110.110 KA Unit
4	Amylase	90.236 Unit
5	Vitamin B1	444.125 mcg/lt
6	Vitamin B2	0.6339 mg/lt
7	Vitamin C	216.408 mg/lt
8	Protein	0.1037 gm/lt
9	Calcium	5.735 milimol/lt
10	Creatinine	0.9970g/lt
11	Phosphorous	0.4805 milimol/lt
12	Uric acid	135.028 mg/lt
13	Phenol	4.7580 mg/100 ml
14	Compound volatile phenol	1.3420 mg/100 ml
15	Free volatile phenol	0.7130 mg/100 ml
16	Aromatic hydroxy acid	2.7030 mg/100 ml
17	Lactate	3.7830 milimol/lt

Table 5: Elements of Cow urine (*Gomutra*) and their uses^[7]

S. No.	Elements	Functions
1	Uric acid	Anti-microbial agent act as anti-cancer agent
2	Sulphur	Enhances intestinal peristalsis movement, purifies blood
3	Sodium	Controls hyperacidity, purifies blood
4	Urea	Strong antimicrobial agent
5	Potassium	Remove muscles fatigue, appetizer
6	Copper	Controls fat deposition in the body
7	Carbolic acid	Prevents gas gangrenes, antibacterial
8	Sugar-lactose	Heart disease, giddiness, thirst
9	Creatinine	Antibacterial
10	Nitrogen	Stimulates kidney and act as diuretic
11	Ammonia	Integrity of blood and body tissues
12	SwarnaKshar	Enhance immunity, antibacterial, act as antidote
13	Vitamin A, B, C, D, E	Enhance potency, prevent from excessive vigor, thirst, vigor
14	Enzyme urokinase	Enhance blood circulation, heart disease, dissolve blood clot

15	Kallikrein	Releases kallidin that reduces blood pressure by expanding peripheral veins
16	Erythropoietin stimulating factor	RBCs production
17	Allatonin	Tumours and wound healing
18	Colony stimulating factor	Helps in cell division and multiplication
19	Anticancer substances	Prevents replication of carcinogenic cells
20	Gonadotropin	Regulation of sperm production and menstrual cycle
21	Phenols	Antifungal, bactericidal
22	Other salts	Antimicrobial, prevents ketoacidosis and coma

Panchagavya is prepared by the mixture of:

- 3 Part- Cow Milk
- 2 part- Cow Curd
- 1 part- Cow Ghee
- 1 part- Cow Urine
- ½ Part- Cow Dung

Preparation in Which Cow Urine is Used ^[8]

- Sanjivani vati
- Agnimukhmandur
- Ashwinikumarras
- Tryushanadimandur
- Panchagavya Ghrita
- Punarnavamandur
- Arshakuthar rasa
- Gomutra alkaline churn (Kapha Nashak)
- Kasisadi Talia
- Panchamrutlohamandur
- Mandurvatak
- Medoharark (cure for obeysity)
- Karnshool

- Ghanvati (Cow urine tablet)
- Gomutra ark (Distilled cow urine)

Table 6: References of Gomutra (Cow urine) in classical Ayurvedic text and its uses^[9]

S. No.	Use of Gomutra (Cow urine) in various formulation/other description	Purposed For
1	Daruharidra (Gomutra (CU) Rasanjann+ bereberisaristata+ Gomutra use in Kushta	Leprosy
2	Gomutra in Kushta + Karvir (neriumindicum)	Leprosy
3	Swarnamakshik + Gomutra in Kushta	Leprosy
4	8 types of urine and each of its having properties and indications	
5	Bakuchibij + Kakodumber + Chitrakmul use in Kshvitra	Vitiligo
6	Mansyadilepa + Chitrakadilepain Kushta	Leprosy
7	Siddharthak Ghrita use in Unmada	Psychiatric disorder
8	Taila Panchaka practice in Gulma	
9	Gomutra employed for bath in Apasmara	Psychiatric disorder
10	Haritakichurna (Terminalia chebula) + Gomutra employed in Kaphajshotha	Swelling
11	Mahapanchagavya Ghrita employed in Apasmara	Psychiatric disorder
12	Rohitakadi yoga in Udara roga	
13	Gomutra + Siddha milk for virechan in Pittoda	Purgation
14	Gomutra is pathya (good for health) in Udara	Ascites
15	Chitrakadilepain KushtaMansyadilepa	Leprosy
16	Tiktekshvakaditailause in Kushta	Leprosy
17	PanchagavyaGhrita use in Apasmara	Psychiatric disorder
18	SiddharthakGhrita use in Unmada	Psychiatric disorder
19	Katabhyaditailafor confined application in Apasmara	Psychiatric disorder
20	GomutraNasyain Apasmara– inhalation	Psychiatric disorder

21	Cow urine use in Kaphodar	Ascites
22	PashanbhedadiGhrita use in Ashmari	Renal Stone
23	Chitrakghrita use in Udara	Ascites
24	PunarnavaMandur use in Pandu	Anaemia
25	Gomutra is Pathyain Udara	Ascites
26	Haritaki + Gomutra use in Kaphaj Pandu	
27	Milk + Gomutradrink in vatajshotha	Skin Infection
28	Mandurvataka use in Pandu	Anaemia
29	Gomutra + Daruharidra + Mahish (buffalo) Ghrita + Daruharidra use in Pandu	Anaemia
30	Milk for Virechan and Gomutra in Pandu	
31	Gomutra and Narayan churna in Udara	Ascites
32	Trikatu(Marich, Suntha, Pippali) + Chitrak and Gomutra use in Kshwitra	Vitiligo
33	Gomutra use in KaphajShotha	
34	Gomutra and milk use in Udara	Ascites
35	Honey + Haritaki and Gomutra use in	Internal Piles
36	Gomutra + Guda and Hartaki in Arsha	Piles
37	Gomutra and Hapushadyachurna in Udara	Ascites
38	Kukkutpurish, Gunja, Kukkutpurish, Haridra, Gomutra and Pippali use as a Arshoghna lepa	Wound or Skin infection
39	Gomutra and Guggul use in Urusthambha Shilajit	Immune modulator
40	Patoladichurna+ gomutra in Udara(~Ascites) Gomutra + chitrak + Trikatu (Pippali Marich, Suntha)use in Kshwitra	Vitiligo
41	Gomutra + Sharshapa and Karanja use in Urusthambha	
42	Gomutra use in Pratisaran Karmain Scar mark	Scar mark
43	Gomutra and Pippalyadi churna use in Hrudrog	Heart disease
44	Gomutra use in purification of Bhallatak	

45	Gomutra and Guduchyadi Taila use in VatajYonovyapad	
46	Gomutra and Sarshapa use in Urusthambha	
47	Mahanil Ghrita use in Kshwitra	Vitiligo
48	KatphaladiKashay(Decoction) use in Hrudrog	Heart disease
49	Shyonakadilepau use in Urusthambha	
50	Gomutra use and Haridra (curcuma longa) in Kushta	Leprosy
51	Gomutra + Mushkakadi Gana + Kshar + Trikatu use as Basti (medicated enema) in Kaphaja Udara	Ascites
52	Gomutra + Sura (alcohol) + Mahavriksha kshira use as Virechan in Dushyodara	Leprosy
53	Gomutra, Vidanga (Embelia ribes), Karavir (Nerium indicum) use as a lepa in Kushta	Leprosy
54	Gomutra use in Lekhana Basti	
55	Gomutra use in Kaphaprakopak Vikarain Basti	
56	Vajraka Taila use in Kushta	Leprosy
57	Gomutra and Eranda Taila (oil of ricinus communis) use in Udara	Ascites

Cow Urine Formulation and Method of Preparation^[10]

Gomutra Arka: It is more popularity, pure and distilled form of cow urine because having no any unwanted smell. It is frequently employed in case of cough, to reducing the weight of body by lowering the cholesterol level in the blood. It also can be formulated by employing pressure cooker in our home. After employing prolong period of duration, it shows better efficacy more effective by using in combination with honey and warm water. Several diseases like obesity, indigestion, urinary disorder, skin disease, gall stone and anaemia are cure by this formulation.

Preparation: This technique is most common and comparable to distillation technique. Cow urine should collect in iron pot or earthen pot having vapour outlet and subjected for heating on fire. Another pot should be kept for the collecting of vapour having transparent tube connecting with first pot which is placed on the cold water and vapour should changed in to condensed form.^[11]

Gaumutrasav: It is the combination of cow urine (10 kg) and organic Jaggery (2 kg) formulated by the fermentation technology by using glass pot or earthen pot which are similar to the urine of cow. It is pure and in stability form hence used in small amount than cow urine which is more effective in form of Asava, is effective in the treatment of asthma, arthritis, urinary disorder, anaemia, worm infection, cold, cough and jaundice.

Dose- 10 ml twice a day with water

Preparation

- Cow urine should collect in glass pot or earthen pot and subjected for boil.
- Odorless substance (ammonia) should removed from cow urine
- Then cow urine should be filter, add Jaggery
- Subjected for dissolving by boiling and then filter
- Mixture should place for 15 days and decant the liquid without disturbing
- Collect the urine in clean pot without shaking
- Urea having thick layer remain settled at bottom and transparent liquid is collected.

Gomutra Ghanwati: These formulations are in in the form of tablet which are prepared from cow urine by using iron pan as collecting pot. In this technique, cow urine is subjected for boiling and obtained concentrated product. 50 g concentrate products are obtained from 1 kg of cow urine which are scratched by pan and formulate in tablet form. Cow dung powder (ashes) are employed for the purpose for preparing non-sticky tablet which is also impart as colour of the dosage form and act as absorbent. The prepared tablets are stored in plastic bag with proper sealing and prevent from the direct sunlight, because tablets should melt on exposure to sunlight. This formulation is used in treatment for skin disease, diabetes, bronchial asthma, rheumatoid arthritis, hypertension, cancer, cold and cough.

Kamdhenu Shiwitranashak Lepa: It is in the case of skin disease like Leucoderma.

Kamdhenu Pramehari: It is employed in case of general weakness and general health tonic.

Kamdhenu Balpal Rasa: It is prescribed with warm water and cow milk to enhance immunity in children, memory enhancer, general health tonic and Kapha disorder in children.

Kamdhenu Harde Churna: It is beneficial in flatulence, piles, constipation, arthritis, anorexia, jaundice, loss of appetite, etc.

Kamdhenu Shwitranshak Vati: It is prescribed in fungal infection and skin disease which is given as 2 tablets in morning and 2 tablet in evening.

Bibhitakavaleha: It is frequently prescribed in cough and respiratory disorder, which is given after meal about 10 g.

Kamdhenu Nari Sanjeevani: It is beneficial in uterine tonic, leucorrhoea, irregular menstrual cycle, etc.

BENEFITS OF COW URINE (GOMUTRA)^[12, 13, 14]

- It is beneficial to eliminates toxins, drug residue and harmful substances from the body.
- It is useful as antidote in the case of poisonous effect in the body and as purifier of chemical toxins.
- It controls the level of several glands like bile, mucous, etc. hence defend against several diseases.
- It is beneficial as to make person stress free and mind active.
- It defend brain and heart from damaged which are caused by mental tension as it is called as Madhya and Hridya in Ayurveda.
- It consists all the nutrients which are essential for appropriate health maintenance.
- It contains copper hence it indicate a significant role in supplying the electric current which maintains the body health.

Uses of Gomutra as Spritual Healing Remedy by the Following Way:

- Gomutra diluted with water and can be administered orally
- Directly employed of Gomutra (concentrated) on affected area of the body
- Bathing with water and small amount cow urine for elimination of negativity from our body.
- Water mixed with water and spread around house for spritual purification of the premices.

For the Preparation of various formulation: Different formulations are as like- Gaumutrasav, Gomutra Ark, Kamdhenu Harde Churna, Kamdhenu Nari Snjeevani, Kamdhenu Balpal Rasa, Kamdhenu Shwitranshak Vati, Kamdhenu Bibhitakavaleha, Medohar Arka, Gomutra Ghanwati, etc.

Purification and detoxification^[15]: Cow urine has great role in the purification detoxification of several compounds which are as follows:

- Purification of Rajavarta (Lapis lazuli)
- Detoxification of aconite
- Purification of Swarna (Gold)
- Purification of Guggul (Commiphora mukul)
- Detoxification of Silver
- Detoxification of Dhatura (Dhatura metel)
- Purification of Bhallataka (Semicarpus anacardium)
- Purification of Tamra (Copper)
- Purification of Loha (Iron)
- Purification of Kharpar (Calamine)
- Purification of Naga (Lead)
- Purification of Abhrakha (Mica)

Anticancer therapy: Cow urine (Gomutra) therapy is the most beneficial remedy for the person suffering from cancer which having no any side effects. It has a free radical properties and antioxidant properties which helps to neutralizes the oxidative stress and repairing the damaged DNA.

Prevention of antibiotic resistance: In the recent period uses of antibiotic agents has been enhanced extremely by which the resistance are developed against anti-microbial agents. Various antibiotics like Ciprofloxacin resistance *P. aeruginosa*, Vanomycin resistance *Enterococcus*, Methicillin resistance *Staphylococcus aureus*, etc. Thus cow urine is most beneficial against the drug resistant microorganisms.

Immuno modulatory activity: Cow urine should mostly act as humoral immunity and also enhances the cellular immunity, which develop antibodies like IgG and IgM. It also enhances the production of Band T lymphocytes and promote the synthesis of interleukin-1 and interleukin-2.

Antidiabetic effect: There are several metabolites are present in the cow urine which produce hypoglycaemic effect. Cow urine enhances the transport of glucose through the cell membrane hence it improves the peripheral glucose utilization. It enhances the synthesis of glycogen from glucose and also improves releases of insulin from the beta cells. In the body cow urine improves the sensitivity of insulin receptor, reduces insulin resistance, and reduces insulin absorption from the intestine.

Fungicidal and antihelmintic effect: Cow urine helps to reduce the evolution of Malassezia fungi (90-95%) and opportunist fungi or act as anti-dandruff. It also beneficial as antifungal activity in protection of crops as beneficial against vegetative form of fungi. It is used in various topical lotion for skin as anti-fungal activity. It is also helpful for the treatment of parasitic helminthes and act as antihelmintic activity.

Anti-hypertension and diuretic effect: Cow urine is most helpful remedy to reduce the hypertension or act as diuretic. It is also beneficial to reduce the cholesterol level in the blood.

Bioenhancer/Biopotentiator: Those substances which enhances the bio-efficacy and bioavailability of active substances is named as bioenhancer. It enhances the oral bioavailability, outcome in reducing their dose and side effects. Cow urine should used as bioenhancer in broad field as like antifungal, anticancer, antimicrobial agents and several other ayurvedic formulations. In Ayurveda there is 'yogvahi' principle that discuss the bioenhancing characteristics of medicines.

Wound healing properties: Cow urine delivers fast recovery of the wound or most potent remedy for the healing process as it contains volatile salts which abolish acidity and decreases the pain in intestine, kidney and womb. It is more beneficial in the case of diabetes patient for wound healing.

Cardiocascular disorder: There are great importance of cow urine in the case of cardiovascular disorder. It contains Kallikrein which acts as a vasodilating agent decreases the hypertension.

Other various elements like ammonia (controls the structural integrity of the blood corpuscles), urokinase (fibrinolytic agent), iron and erythropoietin stimulating factor (controls haemoglobin levels), sodium, nitrogen, calcium, sulphur (helps in purification of blood).

DNA repairing potential: Damaged DNA should very potentially recovered by the cow urine and due to such types of property cow urine is capable to fight with the malignant cancer.

Anti-aging factor: Cow urine reduces the probable of cancer by preventing the formation of free radical.

Effect in anaemia: Cow urine is also useful for anaemia as it contains erythropoietin hormone.

Effect in skin diseases: Cow urine is the most potent remedy to treatment for several skin disorders like skin allergies, acne, etc.

Anti-urolithiatic effect: Cow urine is most beneficial action against renal calculi and restoration of conceded renal function due to it decreases excretion of calcium oxalate and inhibit the crystallization. It has nephroprotective and diuretic action.

Apoptosis: Cow urine improves the apoptosis of lymphocytes (cells that are responsible for fight against growing cancerous cells which are abnormal) and improves the self destruction capability of the growing cells which are abnormal.

Stones: The presence of uric acid in the cow urine is beneficial to dissolve these stones. A glass of cow urine have to be given in the morning for 21 days.

Uses in agriculture: There are various elements present in the cow urine which most beneficial in the production of crops as fertilizers. These helpful elements like nitrogen, ammonium, urea, phosphate, magnesium, etc.

Currently, Intensive Research on Cow Urine is on in Various Scientific Institutes and Organizations^[7, 16, 17]

- Akhil Bhartiye Ayurvedigyan
- Scientific and Industrial Research Organization
- Bhartiye Pashuchikitsa Research Organization
- Pantnagar Krishi Vidhyalaya
- Vishwa Hindu Parishad, Nepal.

➤ Go-Vigyan Anusandhan Kendra, Deolapar

Products of cow urine (Gomutra) in India ^[17]

As per International Research Centre for Science, Nature and Religion (<http://www.science-nature-religion.com/>) indicated the cow urine products are used in India.

- Cow urine cold drinks
- Cow urine medicines
- Cow urine shampoos
- Cow urine hair oils
- Cow urine emulsions
- Cow urine shave lotions
- Cow urine fertilizers
- Cow urine pesticides
- Cow urine phenyls

Collection of Cow urine

There are various criteria are fulfil to collect the cow urine for medicinal purpose.

- Cow should not be affected by any diseases or must be healthy.
- The cow that are drinks healthy water, taking helthy foods (grazes grass and herbs), roams in jungle and exercise herself are appropriate for urine collection.
- The traditional cows are appropriate than Jarsey and Crossbead cow for urine collection.
- Collection of urine from any age of cow but calves is more suitable.
- Cow urine should be collected in clean glass, earthen, steel or china clay pot.

Preservation of cow urine

The purified cow urine should be stored at 4⁰C. The proper storage of cow urine remains the good quality and remains sae without no changes in its colour and odour. It should not deteriorates even stored for prolong period of time. Due to the presence of iron and copper in cow urine may changes its colour and odour. The cow urine should be photoactivated for 72-144 hours in direct sunlight after collection. It is purified by several process like chromatography

technique (by using silica gel G-25), filtration, etc. The containers with cow urine should be properly covered by the help of cotton and clean cloth to protect from external environment.^[10]

Doses of cow urine (Gomutra)^[18]

It is beginning with 3-4 drops of gomutra one or two times a day. It should be amplified up to one or two spoon two times a day after a week. The normal dose of cow urine is 25 ml of two times at a day. It can be used directly by filter and diluting it with water.

Shelf life of Cow Urine

From a chemical composition point of view shelf life of gomutra is 6 months and its spiritual healing properties is approximately 5 years.

Avoid of Cow Urine

Cow urine should be avoid in the following case; the people who suffering from fatigue, male infertility, the children below 10, who are anemic, lean, tired and person who are lack of sleep.

Adverse Effect of Gomutra (Cow Urine)^[10]

It is the unique and safer therapy which has no any major adverse effect was indicated of cow urine. Most of the people may feel uncomfortable with its using because of their smell and taste. Sometimes it increases the motion and causes itch, diarrhoea, soreness of the shoulder, pain, fever, fatigue, etc.

FUTURE PROSPECTIVE

From the studies of several literatures it is explained that the cow urine "Gomutra" has no any major side effects and plays vital role in prevention and treatment in several diseases like cancer, diabetes, AIDS, heart disease, etc. It also concluded that, it is also effective if it is given with the combination of other system of medicines like homeopathic medicines, allopathic medicines, etc. Recently there are 2 patents (patent 6410059 and patent 7235262) are approved as it is indicated that there will be a great and valuable medicines and cluster of health benefits for several diseases in coming days.

ACKNOWLEDGEMENT:

Authors are immense gratification and thankful to Shree Ram Kumar Yadav 'Gokul', member of Vishwa Hindu Parishad, Nepal, encouraged to undertake this dissertation for its comprehensive studies.

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