

Cow Urine (TEI ORKEY) Uses by Ghulfun Tribe (ANCHO) in Noba Mountains, State of Southern Kordofan, As Therapy and Food Additive

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ABSTRACT

The aims of this study are screened the Biochemical analysis and microbial activity of cow urine. It is conducted in Department of Animal Production, Faculty of Agricultural Technology and Fish Science; Biochemical analysis revealed that moisture, urea and minerals contents of fermented cow urine were 95, 2.5 and 2.5%, respectively. The cow pea treated with cow urine is good source of Carbohydrates, protein, fats and minerals which play vital role in health of the person. Whereas, the fermented cow urine was free from bacterial that causes diseases.

Keywords: *Tie, Orkey, Ghulfun and Angsho, cow urine*

1. INTRODUCTION

Cow is a mobile dispensary. It is the treasure of medicines. The cow urine therapy is capable of curing several curable and incurable diseases. Noba Mountain in Southern Kordofan State, the cow urine is locally known as Tie –Orkey The analysis of cow urine has shown that it contains nitrogen, sulphur, phosphate, sodium, manganese, carbolic acid, iron, silicon, chlorine, magnesium, melci, citric, titric, succenic, calcium salts, vitamin A, B, C, D, E, minerals, lactose, enzymes, creatinine, hormones and gold acids (Dr. Rajesh, 2013). Cow urine therapy is helpful in Cancer, diabetes patient, aids, asthma, psoriasis, eczema, blood pressure, heart disease, prostrate, piles, asthma, isnophilia, cough, phlegm, varicose veins, dismonerrhoea, cholesterol, chest pain, aids, migraine, headache, tension, constipation, thyroid, eczema, ringworm, itching and other skin problems, psoriaisis, liver disorder, kidney problem, gynae (Dr. Rajesh, 2013). Cow urine is widely used for many health problems in Sudan since many centuries, particularly in Nubba Mountain, Southern of Kordofan, Sudan. Cow urine exhibits antitoxic activity against cadmium chloride and bioenhancer for zinc, Zn²⁺ (Khan et al., 2005). Cow urine has bioenhancing activity for Rifampicin, the front-line anti-tubercular drug used against tuberculosis, increasing its action up to sevenfold against *Escherichia coli*, and up to 11-fold against Gram-positive bacteria (Amani et al., 2012),. Cow urine distillate enhances the transport of antibiotics such as Rifampicin, Tetracycline, and Ampicillin (Ganaie et al., 2010).

Objectives of this study are investigated the biochemical and microbial activity of Tei Orkey (cow urine) used as food and therapy by Ghulfun tribe in Noba Mountain, State of Southern Kordofan, Sudan.

2. MATERIAL AND METHOD

2.1 Material

Urine was collected from pregnant cow in the morning, after delivery cow its borne (3-6 months>

Sample was taken in the morning in autumn season. Sample was kept in jar at room temperature for several months until urine became dryness as powder.

2.2 Method

Fresh urine was determined according to method described by AOAC (1984). Extraction of minerals was done according to method described by Pearson (1968). Then concentration of minerals in fermented cow urine was measured by using atomic absorption.

2.3 Microbial test

Preparation of Smear was prepared by emulsifying part of a colony in saline and spread it on solid. Smears from liquid media use were prepared by a loop full on solid. The smears were allowed to dry in the air fixed by gentle flaming (Ismail, 2013).

3. RESULTS

3.1 Biochemical Study

Table 1 indicated that moisture, urea and minerals contents of fermented cow urine were 95, 2.5 and 2.5%, respectively. These results revealed that urea and mineral content are same in quantity in fermented cow urine. Those finding are agreed with results reported by Dr. Rajesh (2013). Table 2 illustrated that dry matter in fermented cow urine (94.71 %) is higher than in fresh (87.95%) cow urine. Crude protein for treated cow pea with cow urine is 31% but for fresh cow urine is 28.7%. Crude fiber of cow pea treated with fermented cow urine (12.81%) is greater than cow pea not treated with fermented cow urine (9.15%). Ether extracted in both treated and not treated cow pea with fermented cow urine, there is no significant difference, but there is highly significant difference in ash content in both treated (7.78%) and not treated (2.41%) cow pea with fermented cow urine. N₂ free extracted for cow pea treated with fermented cow urine is higher than in cow pea that not treated with fermented cow urine. Table 3 shown that minerals content of fermented cow urine as follows: 0.04% Ca, 0.01 % K, 0.13% NaCL, 0.06% Mg, 0.03%

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Cu, 1.28% NH₃, 1.63% NH₂, 1.02% S, 0.08% Na and 0.06% K.

3.2 Microbial Study

Table 4 revealed that the fresh and fermented cow urine are free from *E. coli*, *Salmonella typhi*, *Salmonella* in feces, urine. But general bacteria which are only observed in fermented cow urine.

4. DISCUSSION

4.1 Biochemical Study

Cow pea treated with fermented cow urine is rich in dry matter than in cow pea that none treated with fermented cow urine because the dry matter in food such as carbohydrates, fats, proteins, minerals. These findings are agreed with Dr. Rajesh ()

4.2 Microbial Study

The results of microbial activity revealed that fermented cow urine are free from bacteria that causes

diseases because cow urine has amazing germicidal power to kill all varieties of germs causing diseases. These results are agreement with Amani et al., (2012)

5. CONCLUSION

From nutritional view and microbial activity, the fermented cow urine mixed with cow pea is good source of dry matter and minerals which are very important for life activities. In addition it is free from bacterial diseases.

Table 1: Show chemical analysis of fermented cow urine

Moisture	95%
Urea	2.5%
Enzyme, hormone and minerals	2.5%

Table 2: Chemical analysis of Ocoolg (cow pea treated with cow urine) used by Ghulfun tribe in Sudan as food

Sample / Parameters	Dry matter %	Crude protein%	Crude fiber%	Ether extract%	Ash %	N ₂ -Free extract%
Cow pea without cow urine	87.95	28.7	9.15	2.36	2.41	42.8
Cow pea treated with cow urine	94.71	31.0	12.12	2.18	7.78	53.77

Table 3: Show mineral content of fermented cow urine (Tei or key)

Minerals	Ca	P	NaCL	Mg	Cu	HN3	HN2	S	Na	K
%	0.04	0.01	0.13	0.06	0.03	1.28	1.63	1.02	0.08	0.06

Table 4: Microbial test in Fresh and Fermented cow urine

Media used	Test of bacteria	Sample G ₁	Sample G ₂
Macconkey Ager	<i>E coli</i>	-	-
X.L.D	<i>Salmonella typhi</i>	-	-
Bismuth sulphate Ager	<i>Salmonella feces and urine</i>	-	-
Saya Ager	General bacteria	-	+

- (-) = Negative test, (+) = Positive test, G₁= Fresh urine and G₂= Fermented urine

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