Research Paper

Molecular Analysis of *Coxiella Burnetii* by Isocitrate Dehydrogenase Gene Sequence-Based Typing and PCR-RFLP in Isfahan, Iran.

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ABSTRACT

In the recent years, considerable advances have been made in the detection and genotyping of Coxiella burnetii, the causative agent of Q fever. The selection of appropriate genotyping method has enabled description of the clonal diversity of C. burnetii around the word. Since, in the place of study, C. burnetii genotyping has not been done, the icd gene Restriction fragment length polymorphism (RFLP) and sequence-based typing for differentiation between the genomic detected C. burnetii from the various sources and compared the two methods is used. In a observational study, a total of 15 genomic positive cases of C. burnetii infection from different sources in Isfahan province (Central Iran) were enrolled and underwent two genotyping methods: the icd gene PCR-RFLP and icd gene sequence-based typing. The degree of similarity between the icd gene sequences was high (98.3-100%). In compare with C. burnetii Nine Mile icd gene sequence, the nucleotide sequences were different at 11 positions, which resulted in 7 differences in the amino acid sequences. After digesting the 370 bp amplified icd gene fragments all the samples indicated only one band of 370bp, while amplified C. burnetii Nine Mile strain icd gene were digested into two bands with sizes of 221bp and 149bp. The results of two genotyping methods matched together. Used methods in present study were cheaper and easier than new methods and they can used for detection of acute and chronic phases of
infection.

**Keywords:** *Coxiella burnetii*, Isocitrate dehydrogenase, Iran, Restriction fragment length polymorphism, Sequence-based typing
Harmful effects caused by aflatoxin (AF) directed researchers towards to find out new strategies for its control and detoxification increasing the safety of poultry feed. The aim of the present work was to study the protective role of date pits (Phoenix dactylifera) seeds against aflatoxicosis regarding carcass traits, biochemical function tests and histopathology of both liver and kidney in broiler chickens. 210 one-day old Arbor Acres broiler chicks were allotted into 7 equal groups as the first control (G1) supplemented by the basal diet, G2 had the basal diet with date pits supplementation 2%, G3 fed on the basal diet with date pits 4%, G4 was fed a basal diet containing 100µg aflatoxin/kg (100 ppb). G5 fed on a basal diet containing Hydrated Sodium Calcium Aluminum Silicates (HSCAS) 0.3% plus aflatoxin, (G6) fed a basal diet containing date pits 2% plus aflatoxin and finally G7 fed a basal diet containing date pits 4% plus aflatoxin. The aflatoxin supplemented to the broiler ration from first day to the end of experiment at 35 days. Aflatoxins supplementation significantly increased relative liver and small intestine weight, affect liver and kidney biochemical function tests and induced histopathological changes as fatty degeneration of hepatocytes, and interstitial nephritis with mononuclear cell infiltrations in both liver and kidney, respectively. However, addition of date pits (2% and 4%) and HSCAS (0.3%) to broiler's diet partially ameliorated these harmful effects of aflatoxins, indicating their protective effect against aflatoxicosis and this protection is dose-related. Addition of date palm seed (2% and 4%) gave a better results regarding carcass traits, biochemical parameters and histopathological examination of liver and kidney, finally concluding that date palm seed powder could be used as an effective feed additive to control aflatoxicosis in poultry with avoiding harmful effect of chemical mycotoxin binders (HSCAS).

**Keywords:** Aflatoxins, Broilers, Biochemical traits, Carcass characteristics, Date palm, Histopathological changes.
colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study commercial antibiotics. The minimum concentration of SM extracts that potential to inhibit the Enterococcus sp the reptile communities in Surabaya on February 2018 until January 2019. The faeces obtained [Full text-]. Enterobacter cloacae bacteria from the faeces of pet-reptile. A total of 129 fresh faecal samples were collected from Proteus sp (55.03%), and Reptile plays an essential role in human life and act as a reservoir of pathogenic bacteria. It Salmonella enteritidis (32.55%), from 72 snakes, 43 lizards and 14 tortoises. The isolation was conducted using the Micro ID Isolated from Faeces of Pet – Reptile. Kurnianto A, Puspitasari, Widyaningrum LY, Widiyono I and Prakoso YA. Salmonella enterica arizonae Pseudomonas sp (48.83%), ABSTRACT (76.74%), DOI: (82.17%), Antibiotic, Pet – reptile, Reservoir, Resistance, Sansevieria masoniana.


Potency of Sansevieria masoniana Extract Against Antimicrobial Resistant Bacteria Isolated from Faeces of Pet – Reptile

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This study conducted to investigate the effects of dietary zeolite on egg production, egg quality and some blood constituents of rabbits. 180 hens were randomly divided into six equal groups (30 hens / group). The rabbits were of Hi-Plus rabbits, one-day old. The groups were divided as follows:

1. Group (S), hens drank saline well water and fed basal diet.
2. Group (S1), hens drank saline well water and fed diet containing 2% zeolite.
3. Group (S2), hens drank saline well water and fed diet containing 4% zeolite.
4. Group (T), hens drank tap water and fed basal diet.
5. Group (T1), hens drank tap water and fed diet containing 4% zeolite.
6. Group (T2), hens drank tap water and fed diet containing 8% zeolite.

Egg weight significantly increased in the hens of S group compared to them in T, T1 and T2 groups. Egg number and egg mass were significant increases in the hens of S2 compared with hens in T and S groups. Alanine transaminase, aspartic transaminase and creatinine were significantly increased in the hens of S group as compared to the hens of T and T2 groups. Eggshell weight and shell thickness were significantly decreased in the hens of S group compared to T, T1 and T2 groups. Hens of S group had significantly improved feed conversion compared to hens of S group. Alanine transaminase, aspartic transaminase and creatinine were significantly increased in the hens of S group as compared to the hens of T and T2 groups. Eggshell weight and shell thickness were significantly decreased in the hens of S group compared to T, T1 and T2 groups. Hens of S group had significantly improved feed conversion compared to hens of S group.