

## Table of Contents

## In Press

## Article Archive

[CJAS \(63\) 2018](#)
[CJAS \(62\) 2017](#)
[CJAS \(61\) 2016](#)
[CJAS \(60\) 2015](#)
[CJAS \(59\) 2014](#)
[Issue No. 1 \(1-44\)](#)
[Issue No. 2 \(45-95\)](#)
[Issue No. 3 \(97-145\)](#)
[Issue No. 4 \(147-199\)](#)
[Issue No. 5 \(201-249\)](#)
[Issue No. 6 \(251-295\)](#)
[Issue No. 7 \(297-343\)](#)
[Issue No. 8 \(345-390\)](#)
[Issue No. 9 \(391-443\)](#)
[Issue No. 10 \(445-493\)](#)
[Issue No. 11 \(495-537\)](#)
[Issue No. 12 \(539-578\)](#)
[CJAS \(58\) 2013](#)
[CJAS \(57\) 2012](#)
[CJAS \(56\) 2011](#)
[CJAS \(55\) 2010](#)
[CJAS \(54\) 2009](#)
[CJAS \(53\) 2008](#)
[CJAS \(52\) 2007](#)
[CJAS \(51\) 2006](#)
[CJAS \(50\) 2005](#)
[CJAS \(49\) 2004](#)

## Editorial Board

## Ethical Standards

## Reviewers 2017

## For Authors

## Author Declaration

## Copyright Statement

## Instruction for Authors

## Submission Templates

## Fees

## New Submissions/Login

## Subscription

## Effect of melamine and cyanurid acid contaminated diets on blood indicators in broiler chickens

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The effect of melamine and cyanuric acid contaminated diets on basic haematological and biochemical blood indicators in male broiler chickens (Ross 308) was studied. The chickens were divided into 6 experimental groups (30 birds per group) and fed diets with an addition of 50 or 100 mg of melamine or 50 or 100 mg of cyanuric acid per kg of feed, with the contaminants added separately (either melamine or cyanuric acid) or in combination (melamine + cyanuric acid). The control group (C) was fed a diet without melamine or cyanuric acid. At the end of the experiment (day 40), 8 birds per treatment group were randomly selected for haematological and biochemical examination of blood. Red blood cell count, haemoglobin concentration, haematocrit value, mean corpuscular haemoglobin concentration, mean corpuscular haemoglobin, mean cell volume, and total leukocyte count did not differ significantly among the respective groups of broiler chickens ( $P > 0.05$ ). The concentrations of melamine and cyanuric acid used in the contaminated diet for broiler chickens led to highly significant changes in the content of total protein (TP), glucose (Glu), Ca, P, Na, and K ( $P < 0.01$ ) and to significant changes in the content of Mg ( $P < 0.05$ ) in their blood plasma. In comparison to the C group, the decrease in the content of TP, Glu, Ca, P, Na, K, and Mg in blood plasma was most pronounced in broilers fed the diets contaminated with cyanuric acid only or diets with the simultaneous contamination with melamine and cyanuric acid. On the basis of our results, it can be concluded that the contamination of feed with melamine and cyanuric acid, separately or in combination, results in impaired renal function and probably also in partial liver damage.

**Keywords:**

poultry; feed; level of contaminants; haematological indicators; biochemical indicators; toxicity

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