CHLORPROPHAM (201)

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APPRAISAL - RESIDUES IN MILK AND MILKFAT

EXPLANATION

The CCPR at its 38th Session advanced the MRL for cattle milk, 0.0005 (*) F mg/kg, to Step 8 and also requested the JMPR review the basis for setting the cattle milk MRL. Chlorpropham was evaluated by JMPR 1965(T), 2000(T), 2001(R), 2005 (T). It was listed for review by the 2008 JMPR at the 39th Session of the CCPR.

Chlorpropham is designated fat soluble.

Relevant studies on analytical method, livestock metabolism, and livestock feeding were supplied to the 2001 JMPR. All were studies considered during the periodic re-evaluation of chlorpropham (2001 JMPR Report). No new data were made available.

The 2001 JMPR reported results for a 28-day dosing study in which lactating cows given chlorpropham by capsule at a level equivalent to 0, 322, 955 or 3111 ppm in the feed (dry weight basis). Only minor concentrations of chlorpropham residues (< 0.01–0.06 mg/kg) were found in whole milk that did not scale with dose level. For the lowest dose level, maximum average residues for milk produced on any single day were 0.043 mg/kg at day 18 of dosing. Chlorpropham residues could not be detected in skim milk, but in cream the concentrations were 0.02–0.03 mg/kg at the lowest dose level and 0.18–0.64 mg/kg at the highest dose level.

Following the revised policy of JMPR of estimating maximum residue levels for both whole milk and milk fat when data are available, the Meeting re-evaluated the transfer of residues to milk. The same dietary burden as used by the 2001 JMPR of 63 ppm for lactating dairy cows was employed for estimating both the maximum residue level and STMR.

Residues in milk did not show a consistent pattern with duration of dosing and the Meeting decided to estimate residues based on residues in milk for the day that gave the highest residues. Maximum average residues, in a singles day's production, were 0.043 mg/kg for day 18 for the 322 ppm group. The Meeting estimated maximum residues in whole milk of 0.0085 mg/kg (0.043 mg/kg ×63 ppm/322 ppm).

Data on residues in cream can be used to estimate residues in milk fat noting cream contains 40–60% fat. Residues in cream were only reported for day 14 of dosing for which residues in whole milk were < 0.01 mg/kg. Average residues in cream at day 14 were 0.027 mg/kg and assuming cream contains 50% milk fat, residues in milk fat would be 0.054 mg/kg. Scaling the anticipated milk fat residue to a feed level of 63 ppm gives a highest residue of 0.011 mg/kg (0.054 mg/kg×63 ppm/322 ppm).

The Meeting estimated maximum residue levels for chlorpropham in milks (=whole milk) of 0.01* mg/kg and for milk fat of 0.02 mg/kg and highest residues of 0.0085 and 0.011 mg/kg respectively. In estimating STMR values the Meeting noted that on most days residues in milk were < 0.01 mg/kg for the 322 ppm dose group and therefore estimated STMRs for whole milk and milk fat of 0.00195 mg/kg (< 0.01 mg/kg ×65 ppm/322 ppm).

RECOMMENDATION

Commodity		MRL, mg/kg		STMR or STMR-P, mg/kg	HR or HR-P, mg/kg
CCN	Name	New	Previous		
ML0812	Cattle Milk	W	0.0005 (*) F	0.0003	
ML0106	Milks	0.01 (*)		0.00195	
FM 0183	Milk fats	0.02		0.00195	