MIKROP®
mineral-vitamin animal nutrition

NUTRITIONAL SUPPLEMENTS FOR CATTLE

CATTLE NUTRITION SPECIALISTS

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M series mineral fodder for dairy cows and other cattle

MINERAL FODDER FOR INCLUSION IN FEED RATIONS AND FOR THE PRODUCTION OF SUPPLEMENTARY FEED MIXTURES (FM)

Name	M0	M1	M2	M3	M4	M5	M6	M7	M8
Code	235 000	235 100	235 200	235 300	235 400	235 500	235 600	235 700	235 800
CONTENT OF ACTIVE SUBSTANCES IN 1 KG OF MINERAL FODDER									
Calcium (Ca) g		50	95	130	140	150	150	180	180
Phosphor (P) g	90	90	95	100	70	60	50	45	40
Sodium (Na) g	90	90	90	90	90	90	90	90	90
Magnesium (Mg) g	80	80	80	80	80	80	80	80	80

Versions	E	Z	K	H	Ni	B	L	M	Sc	Mg	Se
Iron (Fe) mg	2 000	2 000	2 000	2 000							
Copper (Cu) mg	1 500	1 500	1 500	2 000							
Manganese (Mn) mg	7 000	7 000	7 000	8 000							
Zinc (Zn) mg	7 000	7 000	7 000	10 000							
Selenium (Se) mg	30	30	30	35							
Iodine (I) mg	110	110	110	200							
Cobalt (Co) g	25	20	25	35							
Magnesium (Mg) g										110	
Sulphur (S) g				20							
Vitamin A (thousands) IU		800	1 000	1 000							
Vitamin D3 (thousands) IU		100	100	200							
Vitamin E mg		1 000	3 000	5 000							
Niacin mg					30 000						
Org. zinc (Zn) mg						1 800	2 000	1 000 L			
Org. manganese (Mn) mg						1 800					
Org. copper (Cu) mg						300		250 L			
Org. selenium (Se) mg						10		6 L			6
Biosaf g									16		
Biotin mg							80				

We can add any kind of registered feeding additives into all of the versions.

Name	Usage	Recommended dosage
M 0	mineral fodder for dry standing dairy cows	150–250 g/head/day
M 1, M 2, M 3	mineral fodder for dairy cows (to supplement feed rations with deficiency of phosphor)	150–300 g/head/day or 3–5 % into supplementary FM
M 4, M 5, M 6	mineral fodder for dairy cows (to supplement feed rations with balanced ratio of calcium and phosphor)	150–300 g/head/day or 3–5 % into supplementary FM
M 7, M 8	mineral fodder for dairy cows (to supplement feed rations with deficiency of calcium)	150–300 g/head/day or 3–5 % into supplementary FM

Varianta	Usage
Version E	Economic version
Version Z	A supplementary fodder series for cows without market milk production and low-production dairy cows
Version K	Typical version of supplementary fodder for dairy cows
Version H	A supplementary fodder series for dairy cows in the first stage of lactation and high-production dairy cows
Version Ni	With addition of niacin
Version P	With addition of buffers (to prevent rumen acidosis)
Version B	With organically bound Zn – 1800 mg, Mn – 1800 mg, Cu – 300 mg, Se – 10 mg
Version L	For the prevention of laminitis – with bioplex Zn and biotin
Version M	For the reduction of the number of somatic cells in milk – with Zn, Cu and Se lactates
Version Sc	With addition of Sacharomyces cerevisiae yeast culture
Version Mg	With a higher content of magnesium – 110 g
Version Se	With organically bound selenium in the form of SELPLEX
Version N	Non-dusty
Version U	With content of 25 % urea (71 % N-substances). The other nutrients - 75 %.

M series supplementary fodders serve for the achievement of the optimum concentrations of macronutrients, micronutrients and vitamins in feed rations for dairy cows and young cattle. When distributed in recommended dosage they contribute to maintaining of good health of animals, ensuring the demanded utilization and achieving the reproduction indicators. The versions of the M series are recommendable especially for farming with a higher risk of metabolic disorders. To meet the customers' wishes and needs, it is possible to produce a supplement using various versions (e.g. M 8 H M Ni Sc).

Important: **U versions contain urea, do not use in drinks!!!**
Dosage: in g/head/day into the feed ration or 3 %, i.e. 30 kg of supplementary mineral fodder into 1t of supplementary feed mixture.
Shelf life: 4 months after the production date
Packaging: 40, 50 kg depending on the version (paper bags with PE insert); store in dry areas which can be aired

M SERIES MINERAL FODDER FOR THE PRODUCTION OF SUPPLEMENTARY FEED MIXTURES FOR CALVES, YOUNG CATTLE AND CATTLE FATTENING

Name	Code	Macronutrients (g)				Micronutrients (mg)							Vitamins (thousands IU)			
		Ca	P	Na	Mg	Fe	Cu	Mn	Zn	Se	I	Co	vit. A	vit. D3	vit. E	B series
M-HŽ	234 100	200	75	100	60	1 900	750	3 500	3 500	10	65	10	1 000	100	1	no
M-HŽ-E	234 110	200	75	100	60	1 900	750	3 500	3 500	10	65	10				no
M-ČOT-S	234 120	190	50	60	35	3 500	1 000	3 500	3 500	10	65	20	500	50	0.6	yes
M-ČOT	234 130	190	50	60	35	3 500	1 000	3 500	3 500	10	65	20	500	50	0.6	no

	Usage	Recommended dosage
M-HŽ	for the production of supplementary feed mixtures for young cattle and fattening cattle	3–6 % to the supplementary feed mixture (SFM)
M-HŽ-E	for the production of supplementary feed mixtures for fattening cattle	3–6 % to the SFM
M-ČOT-S	for the production of supplementary feed mixtures for calves – ČOT Starter	3.5–5 % to the SFM
M-ČOT	for the production of supplementary feed mixtures for calves - ČOT	3.5–5 % to the SFM

PO AND CA SERIES MINERAL FODDER FOR SUPPLEMENTING FEED RATIONS OF DAIRY COWS IN PREPARATION FOR CALVING

Name	Code	Macronutrients (g)				Micronutrients (mg)						Vitamins (thousands IU)		
		Ca	P	Na	Mg	Cu	Mn	Zn	Se	I	Co	vit. A	vit. D3	vit. E
PO Plus	234 200	75	45	50	110	2 500	10 000	10 000	35	350	80	750	150	10
PO Plus Ani	234 210	75	45		110	2 500	10 000	10 000	35	350	80	750	150	10
PO Standard	234 220	158	50		90	1 000	3 300	3 000	8	26	9	300	50	3
CA 1	234 240	200				30 000	120 000	120 000	420	4 200	960	9 000	1 800	120

	Usage	Recommended dosage
PO Plus	to supplement feed rations for dairy cows before calving, without anionic salts	100–200 g with 200–300 g of lime to SFM
PO Plus Ani	to supplement feed rations for dairy cows before calving, with anionic salts	100–200 g with 200–300 g of lime to SFM
PO Standard	to supplement feed rations for dairy cows before calving, without anionic salts	400–500 g to SFM
CA 1	concentrated mineral feed for the preparation of SFM	0.5 % to SFM

TA AND OT SERIES MINERAL FODDER FOR DAIRY COWS IMPROVEMENT OF RUMEN FUNCTION AND REDUCTION OF STRESS

Name	Code	Macronutrients (g)					Vitamins (thousands IU)
		Ca	P	Na	Mg	K	vit. E
TA Rumi	234 300	280					
TA Soda	234 305	60		70			
TA Standard	234 310	85					
TA Mg	234 315	9		82	150		
TA Letní	234 320	218			96	128	
TA Retard	234 335	175		112	62		
OT 1	234 340	90					4 000
OT 2	232 945	100		54	25	75	

	Usage	Recommended dosage
TA Rumi	for fast removal of rumen fermentation accidents, contains a yeast culture	200–300 g/head/day
TA Soda	for improvement of rumen fermentation in case of high acidity of bulk feed	up to 350 g/head/day
TA Standard	for improvement of rumen fermentation, increase of intake and utilization of feed rations	up to 300 g/head/day
TA Mg	for improvement of rumen fermentation with higher proportion of MgO	up to 300 g/head/day
TA Letní	for improvement of rumen fermentation in case of heat stress	up to 300 g/head/day
TA Retard	for improvement of rumen fermentation, contains content of buffers with a prolonged effect	up to 200 g/head/day
OT 1	for strengthening of rumen function in dairy cows in the period of milk production start, with yeast	250 g/head/day
OT 2	for strengthening of rumen function in dairy cows in the period of milk production start, with potassium	250 g/head/day

INFUSIONS AND OPTIONAL DRINKS AS PREVENTION OF AFTER-CALVING TROUBLES AND RUMEN DYSFUNCTIONS IN DAIRY COWS

Name	Code	Macronutrients (g)					Micronutrients (mg)					
		Ca	P	Na	Mg	K	Cu	Mn	Zn	Se	I	Co
Nálev Anti-keto	234 400	145										
RUMIN	890 000	250	7		5		75	150	150			100
Nápoj Porod	234 403			19		25						
Nápoj Porod plus	234 406	34	24	15	10	15						

	Usage	Recommended dosage
Nálev Anti-keto	infusion for dairy cows on the calving day, prevention of after-calving paresis and ketosis	300–500 g in infusion
RUMIN	infusion for dairy cows to remove rumen dysfunctions	330 g in infusion
Nápoj Porod	optional drink for dairy cows after calving, prevention of after-calving complications	1000 g in 20–40 L of lukewarm water
Nápoj Porod plus	optional drink for dairy cows after calving, prevention of after-calving complications	1000 g in 20–40 L of lukewarm water

MILK FEED MIXTURES FOR NUTRITION OF CALVES IN MILK PERIOD

Name	Code	Basic nutrients (g)						Macronutrients (g)				Micronutrients (mg)					Vitamins (thousands IU)			
		NS	Fat	Fi.	Pop.	Lys.	Met	Ca	P	Na	Mg	Fe	Cu	Mn	Zn	Se	vit.A	vit.D3	vit.E	B series
MIKROP TEL Stand.	631 110	205	185	9	7.5	16	5.1	10	6	6	1.4	220	14	140	190	0.4	25	5	0.1	yes
MIKROP TEL Acid	631 200	205	185	9	7.5	16	5.1	10	6	6	1.4	220	14	140	190	0.4	25	5	0.1	yes
MIKROP TEL Premi.	631 100	230	185	8	7.5	18	5.8	10	7	6	1.5	220	14	140	190	0.4	25	5	0.1	yes
MIKROP TEL Baby	631 105	230	185	3.2	7.3	19	6.3	10	7.5	6	1.9	220	14	140	190	0.4	25	5	0.1	yes

	Usage	Recommended dosage
MIKROP TEL Stand.	for common farming conditions, 110 g for 890 ml of water 40°C warm	2–3 times a day 1.5 up to 2 L
MIKROP TEL Acid	for farming in higher environment load conditions, 110 g for 890 ml of water 40°C warm	for one watering, i.e.
MIKROP TEL Premi.	for farming with high demands, 110 g for 890 ml of water 40°C warm	5–6 ml of the drink a day
MIKROP TEL Baby	milk feed mixture with a high content of protein for the first 2–3 weeks of life, 110 g for 890 ml of water 40°C warm	

MINERAL LICKS FOR SUPPLEMENTING CATTLE, SHEEP AND GOATS WITH MINERALS AND VITAMINS

Name	Code	Macronutrients (g)				Micronutrients (mg)						Vitamins (thousands IU)		
		Ca	P	Na	Mg	Cu	Mn	Zn	Se	I	Co	vit. A	vit. D3	vit. E
ML 2	137 020	37	60	92	70	1 200	7 000	7 000	20	110	20			
ML 3	137 030	100	48	48	72	1 200	7 000	7 000	20	110	20			
ML 3 - 3	137 033	140	50	90	100	2 000	8 800	11 000	100	85	30			
ML 4	137 040	125	35	48	70	1 200	7 000	7 000	20	110	20			
ML 5	137 050	160	28	65	51	1 000	3 500	3 500	15	100	15			
ML 7	137 070	100	35	115	30		850	3 900	15	35	10	100	20	0.3

	Usage	Recommended dosage
ML 2	supplement of feed rations with deficiency of phosphor and sodium for dairy cows and young cattle	50–150 g/head/day
ML 3 - 3	mineral lick to supplement feed rations of beef cattle on pasture (for ecological farming)	50–150 g/head/day
ML 3, 4 a 5	supplement of feed rations with various deficiencies of calcium for dairy cows and young cattle	50–150 g/head/day
ML 7	mineral lick for sheep and goats	20–50 g/head/day

PROTEIN CONCENTRATES AND COMPLETE CALF STARTERS

Name	Code	Basic nutrients (g)				Macronutrients (g)				Micronutrients (mg)							Vitamins (thousands IU)			
		NS	Fat	Fi.	NEL	Ca	P	Na	Mg	Fe	Cu	Mn	Zn	Se	I	Co	vit.A	vit.D3	vit.E	B series
ČOT-S-BK	331 191	350	61	57	6	28	11	9	6	465	40	300	370	5	7	3	62	6	0.1	yes
BK ČOT 1	331 195	340	60	58	6	26	13	7	5	315	50	260	335	1	2	2	60	6	0.093	yes
ČOT-S-Komplet CZ	331 201	195	32	54	7	11	6	4	4	240	15	95	120	2	3	1	20	2	0.033	yes
ČOT-S-Komplet KUK	331 202	200	39	52	7	13	7	5	5	155	20	120	150	2	3	1	25	3	0.04	yes
ČOT 2	331 220	245	22	43	7	10	7	2	3	145	20	105	125		1	1	21	2	0.042	yes

	Usage	Recommended dosage
ČOT-S-BK, BK ČOT 1	in combination with milled grain to complement feed mixture ČOT Startér	30–40 % to the feeding mixture
ČOT-S-Komplet CZ	complete pelletted starter for calf (pellets contain whole grains)	ad libitum
ČOT-S-Komplet KUK	complete pelletted starter for calf (pellets include maize grains)	ad libitum
ČOT 2	complete pelletted starter for calf with extra proportion of N-substances and maize grain	ad libitum

PROTEIN CONCENTRATES FOR DAIRY COWS AND OTHER CATTLE

Name	Code	Basic nutrients (g)		Macronutrients (g)				Micronutrients (mg)						Vitamins (thousands IU)		
		NS	NEL	Ca	P	Na	Mg	Cu	Mn	Zn	Se	I	Co	vit. A	vit. D3	vit. E
BK HŽ 1	334 010	600	4.5	50	12	25	20	170	720	700	2	13	2	140	15	0.065
BK HŽ 2	334 020	500	4.5	39	14	20	20	170	700	680	2	13	2	140	15	0.13
BK HŽ 3	334 003	700	3.0	65	12	35	25	250	970	940	2	13	2	140	15	0.065
BK Porod	137 040	304	5	99	7.5	5.5	18.9	290	1 150	1 150	5	39	10	80	15	1.1
BK Otelené	137 050	332	6.2	29	4.8	4.1	2.5									1.1
BK Rozdoj	332 042	331	4.8	55	20	10	14	250	1 050	1 050	4	20		250	25	0.25
BK DM	332 183	2 340	1.2													
BK D-OPTI	332 121	2 150	1.2													
BK D-OPTI URO	332 122	2 250	1.2													

Important: The BK HŽ 1. BK HŽ 2. BK HŽ 3. BK DM. BK D-OPTI and BK D-OPTI URO supplements contain urea. do not use in drinks!!!

	Usage	Recommended dosage
BK HŽ 1	protein concentrate for feeding bulls with urea from 6 months of age	0.4–0.8 kg/head/day
BK HŽ 2	protein concentrate for feeding bulls with urea from 6 months of age, with a higher dose of Mg	0.4–0.8 kg/head/day
BK HŽ 3	protein concentrate for feeding bulls with urea from 6 months of age, with a higher dose of Na and Mg	0.4–0.5 kg/head/day
BK Porod	protein concentrate for dairy cows 2–4 weeks before calving	1.5 kg of PC and 1.5 kg of grain /head/day
BK Otelené	protein concentrate to strengthen feed rations of dairy cows in the first 3–5 weeks of lactation	1 kg/head/day
BK Rozdoj	protein concentrate to supplement the feed ration in the milk production start period	1–2 kg/head/day
BK DM	protein concentrate for cattle from 6 months of age with high content of urea	up 120 g/head/day
BK D-OPTI	protein concentrate for cattle from 6 months of age with high content of protected urea	up 150 g/head/day
BK D-OPTI URO	protein concentrate for cattle from 6 months of age with high content of urea and its protected form	up 130 g/head/day

QUICK SOURCES OF ENERGY AND BY-PASS PROTEIN FOR RUMINANTS

Name	Code	Content of nutrients (g, IU)							Macronutrients (g)			
		Dry matter	NS	Degrad. P	Non-degrad. P	Fat	Fibre	NEL	Ca	P	Na	Mg
CUKROPEKT	232 586	940	70	21	15	5	120	8	2	2	3	2
Směs EC	232 585	940	65	24	12		3	9				
CUKROPASS	232 587	940	308	38	195	3	84	6.5	2	5		

	Usage	Recommended dosage
CUKROPEKT	improves rumen fermentation, increases intake of dry matter of FR, utilization and fat content of milk	0.5–1.2 kg/head/day
Směs EC	contributes to a quick start of rumen fermentation, increases the intake and utilization of FR dry matter	75–200 g/head/day
CUKROPASS	excellent supplement of feed rations with a high content of protein haylage	0.5–1 kg/head/day

PACKAGING:

Polyethylene bags and containers:
for retail customers – HOBBY program

Big Bags: up to 500 kg (acc. to the kind of product) high capacity bags – max. a ton on a pallet

Paper bags with polyethylene insert:
20–50 kg – standardized weight acc. to the kind of product

Mobile transport:
freely laid

SHELF LIFE: printed on the packaging