LABORATORY HK EQUIPMENT

SPECIALISTS FOR MACHINERY FOR THE PREPARATION OF SPECTROMETRIC AND LABORATORY SAMPLES

MILLING CONTAINERS HK 409

HÁJEK & KOUCKÝ, DVOŘÁKOVA 299, 511 01 TURNOV, CZECH REPUBLIC, TEL./FAX: +420 436 31 22 31, +420 436 31 22 32

MILLING CONTAINERS HK 409

The containers for sample preparation are specially constructed for laboratory swing mills. They are provided in configuration with a milling stone, cover and silicone o-ring. They allow milling and blending the materials being sampled up to 40 ml.

Dimensions (in configuration) Ø 109 mm height 55.5 mm
Milling stone Ø 50 mm height 23.0 mm
Volume 100 ml

Properly chosen a milling container will significantly enhance the analytical accuracy. The material of a milling container should be harder than the material of a sample to be ground and its presence in the sample should not interfere with analysis.

We offer milling containers made of very pure and homogeneous materials whose composition, resistance to abrasion and hardness meet all serious spectroscopist's demands.

HK 409 milling containers allow effective milling and blending of all kinds of spectroscopic samples from ores and rocks to plastics, organic substances and alimentary and pharmaceutical products.

Material Major Elements	Minor Elements	Vickers Hardness HV1[N/mm²]	Specific Weight [g/cm³]	Order No	Coloured Mark
Hardened Steel Fe, Cr	C, Mo, W V, Si, Mn	800	7.9	40 91 10	
Nitrided Steel Fe, Cr	C, Mo, W V, Si, Mn	1150	7.9	40 91 20	
Stainless Steel Fe, Cr, V	C, Mo, W	660	7.9	40 91 30	
Corundum 99.6% Al_2O_3	Si, Ca, Mg	1650	3.89	40 92 10	
Corundum 99.9% Al_2O_3	Si, Ca, Mg	1850	3.95	40 92 20	
Zirconia Oxid 99.9% ZrO_2	Hf, Y, Na	1350	6.1	40 92 30	
Tungsten Carbide W, C, Co	Ni, Cr, Fe	1500	13.5	40 93 10	
Plastic C	–	–	1.5	40 94 10	

CHOOSE SUITABLE MILLING CONTAINERS THAT WILL PROVIDE OPTIMUM RESULTS IN LABORATORIES!

HARDENED STEEL – no laboratory should lack milling containers made of this material. These containers are suitable for universal grinding. Their durability is very long because of internally hardened steel.

NITRIDED STEEL – the hardness of surface layer is much higher (0.1 mm into depth) and, therefore, it is suitable for milling of harder samples. The steel of these containers is harcened to the core, too.

STAINLESS STEEL – is more resistant to chemicals. However, if halogenides that interfere with steel are released from the samples, the ceramic, tungsten carbide and/or plastic containers should be used.

TUNGSTEN CARBIDE – this material is much harder and weighty than steel and, therefore, tungsten carbide containers are widely used in all laboratories. The milling process is faster and so the wear and contamination is minimal. Besides tungsten, the presence of cobalt should be taken into account. However, further trace elements occur in a minimum amount below 0.1%.

PLASTIC MATERIALS – hardened polystyrene or methylmethacrylate are usually used when soft materials are to be ground. They are used for the milling of grain or other similar organic samples. Only when using these containers, the impurities present in your sample can be revealed with reliability.

CERAMIC CONTAINERS

are made of highly pure stably bioinert, non-carcinogenic and corrosion resistant materials.
Their hardness and resistance to abrasion are very high.
Nevertheless, the ceramic is very fragile and should be handled carefully.

CORUNDUM 99.6 – is a pure aluminium oxide with residual amounts of silicon, calcium and magnesium. The containers made of this material are especially suitable in cases when steel or tungsten carbide cannot be used due to metal sample contamination.

CORUNDUM 99.9 – is a highly pure material with a much lower residual amount of elements. It represents the ultimate hardness with minimum metal contamination. Thus, the containers made of this material can be used in the most demanding applications.

ZIRCONIA OXIDE – By many specialists it is considered to be nearly the optimum material for milling containers because only very low contamination is present. Moreover, the elements which may be contaminated are not usually important for the analytical practice. This ceramics is more consistent than aluminium oxide and so the speed of milling in these containers is close to that in steel.