TESTING OF KNIVES FOR SHARPNESS AND PERFORMANCE

Introduction

Until fairly recently, kitchen knife and blade producers all over the world could make claims that their knives were the sharpest, or the best. Nobody could contradict these statements as there was no objective way of determining sharpness and performance.



Test reporter Mr. GLOBAL
Mino Tsuchida

Blade Cutting Testing Machine by C.A.T.R.A.

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C.A.T.R.A., the Cutlery and Allied Trades Research Association based in Sheffield, England, developed a machine which can objectively test and measure the sharpness and durability of knife blades. Many organizations currently send knife samples to them for testing and evaluation. We, at GLOBAL, now possess two of these machines which are used to test and monitor the performance of GLOBAL knives to keep the highest quality at all times. The tests are conducted twice: once after the blade sharpening process at our factory and the second time at our export department before overseas shipment. By this means we can obtain undeniable objective information on the relative sharpness and performance of our knives, as produced by our factory, and after re-sharpening by various methods.



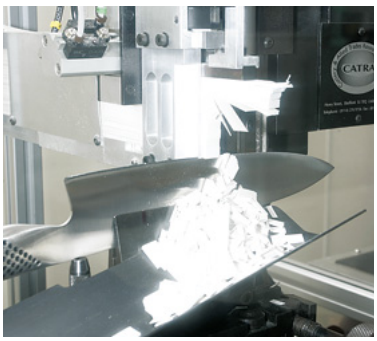
Methodology

The knife is fixed in the machine and the blade is mounted in a position with the edge vertical. The blade is moved back and forth whilst a pack of special testing paper lowered onto the blade. The blade cuts through the paper and the sharpness is then measured.

2 measurements are produced:-

1. Initial Cutting Performance (ICP)
   This measurement is based on the first 3 strokes, which represents the cutting ability or the sharpness of the blade.
2. Total Card Cut (TCC)
   This is measured by conducting over 60 strokes, which represents the life of the blade.

   These two measurements are produced and recorded by a computer for each of the knives tested.



Testing of Knives in Original Condition

We regularly test our GLOBAL knives in their original ex-factory condition. We also regularly make test purchases of alternative brand of kitchen knives on the market and test them also to obtain relative data.

We have a number of charts and records available which show that GLOBAL knives conditionally outperform all other brands tested, in terms of both initial sharpness and durability.

Recent developments by GLOBAL, notably the adoption of the special exclusive CROMOVA 18 blade material and the automation of the grinding processes, have further distanced GLOBAL knives from the rest. In fact the remarkable results produced by GLOBAL ofte take them beyond the results scale provided by C.A.T.R.A. and have forced us to add yet higher levels of excellence in some of the categories. (Please refer to the various test reports for these comparisons.)

Sharpening of Knives

All kitchen knives should be kept sharp for optimum performance. Different knife manufacturers recommend different methods for keeping their knives sharp. Traditionally many chefs and butchers used sharpening steels, the poles of which were made of metal. Mor recent versions may be composed of ceramic or diamond coated material.

The blades of Japanese knives such as GLOBAL are made from special material which should not be re-sharpened using metal pole steels as they are too coarse. Ceramic steels may be used, although effective use of these is rather difficult for the non-expert.

The secret of achieving a sharp edge along the whole cutting edge of a knife is to maintain a constant sharpening angle of 15-20 degree between the blade and the sharpening medium. This is easiest achieved using a flat sharpening surface, hence we strongly recommend use of a flat whetstone for re-grinding or sharpening our GLOBAL knives. Suitable whetstones come in different materials our two main ranges are made from aluminum oxide (which is a composite material that must be soaked in water before use) and ceramic (which just requires a little water for lubrication.) In each case there are also variations of roughness or grit to enable coarse, medium or fine grinding, according to the condition of the blade.

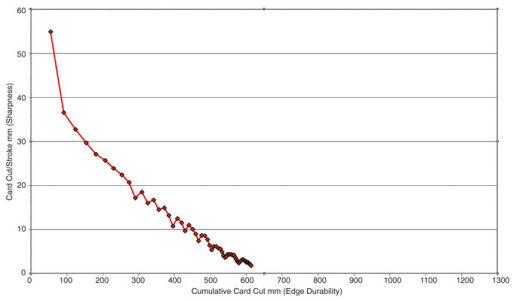
CATRA Cutting Test to ISO 8442.5
COMPARISON FOR ORIGINAL FACTORY SHARPENED KNIVES AND &
WATER WHETSTONE SHARPENED WITH GUIDE RAIL

Maker and Knife	Test#		ICP	Improvement.	LIFE TCC	Improvement
OXO	221		67.0		211.5	

14781 Santoku knife	225	Whetstone sharpend	121.9	81.94%	750.7	254.94%
HENCKEL 4 Stars 31119-180 Santoku knife	213	Factory sharpend	105.8		473.0	
	248	Whetstone sharpend	117.2	10.78%	625.8	32.30%
WUSTHOF LE CORDON BLUEU Chef's knife	218	4581/20 Factory sharpend	95.7		307.6	
	244	4581/20 Whetstone sharpend	121.4	26.86%	696.2	126.33%
WUSTHOF CULINAR (ALL SS) Santoku	220	4179/17 Factory sharpend	86.0		255.3	
	238	4179/17 Whetstone sharpend	118.6	37.91%	608.9	138.50%
WUSTHOF GOURMET, Santoku	215	4188/7 Factory sharpend	104.9		476.6	
	239	4188/7 Whetstone sharpend	114.1	8.8%	624.1	30.95%
SABATIER LION Cook knife	437	Factory sharpend	22.4		44.2	
	463	Whetstones harpen	122.7	447.77%	641.7	1,351.81%
VICTORINOX Chef's knife	436	52000.19 Factory sharpend	106.4		403.5	
	464	52000.19 Whetstone sharpend	124.5	17.01%	613.0	51.92%
GLOBAL FAKE knife(Made in China)	314	G-2 Factory sharpend	10.5		24.7	
	320	G-2 Whetstone sharpend	88.5	742.086%	490.1	1,884.21%
KATAOKA M11 CLAD Vegetabl, 16cm.	365	Factory sharpend	80.6		272.9	
	374	Whetstone sharpend	153.8	90.82%	1,213.5	344.67%
KATAOKA M11 CLAD Vegetable, 18cm.	367	Factory sharpend	110.7		412.9	
	375	Whetstone sharpend	192.9	74.25%	1,280.9	210.22%
KAI SHUN DM-0706 Chefs knife	205	Factory sharpend	108.0		487.5	
	236	Whetstone sharpend	127.6	18.15%	711.3	45.91%
PORSCHE P02 Santoku knife	444	Factory sharpend	89.7		307.0	
	452	Whetstone sharpend	116.0	29.32%	794.2	158.70%
ROSENDAHL Vegetable knife	400	SM-3 Factory sharpend	99.2		328.8	
	415	SM-3 Whetstone sharpend	107.5	8.36%	937.6	185.16%
ROSENDAHL Chef's knife	402	SP-1 Factory sharpend	85.2		235.3	
	413	SP-1 Whetstone sharpend	143.4	68.31%	953.2	305.14%
ROSENDAHL Cook knife	408	SL-1 Factory sharpend	104.4		388.6	
	414	SL-1 Whetstone sharpend	142.0	36.02%	818.1	110.52%
ROSENDAHL Vegetable knife	438	SP-3 Factory sharpend	109.9		405.8	
	456	SP-3 Whetstone sharpend	124.4	13.20%	924.6	127.8585%
ROSENDAHL Vegetable knife	449	SL-3 Factory sharpend	97.5		350.4	
	451	SL-3 Whetstone sharpend	114.7	17.64%	933.9	166.52%
GLOBAL Cook knife	316	G-2 Factory sharpend	127.7		781.5	
	354	G-2 Whetstone sharpend	146.0	14.33%	1,129.3	44.50%
GLOBAL Vegetable knife	226	G-5 Factory sharpend	118.8		617.1	
	306	G-5 Whetstone sharpend	121.9	3.0%	1,070.4	73.46%
GLOBAL SANTOKU knife	207	G-46 Factory sharpend	94.3		412.0	
	286	G-46 Whetstone sharpend	137.6	45.92%	1,062.3	157.84%
GLOBAL SANTOKU knife	465	GS-35 Factorysharpend	106.4		441.3	
	468	GS-35 Whetstone sharpend	105.8	-)1%	1,037.2	135.03%

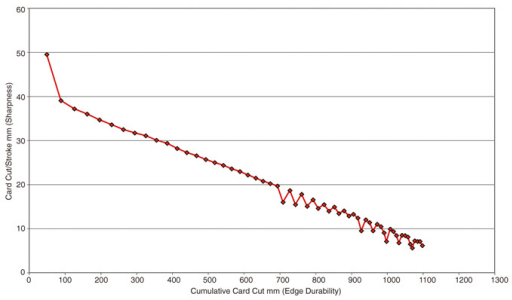
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G-2 Cook, Factory sharpend



CATRA Cutting Test to ISO 8442.5

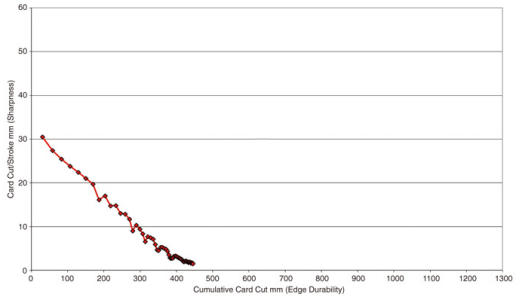
G-2 Cook, Wet stone sharpend

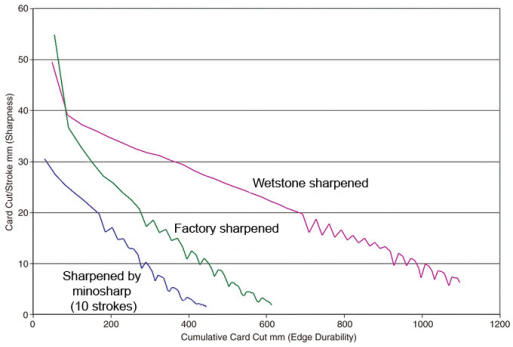


CATRA Cutting Test to ISO 8442.5

G-2 Cook, sharpend by minosharp (10strokes)

CATRA Cutting Test to ISO 8442.5













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