ECAP – Equal Channel Angular Pressing
for high performance nanostructured materials

12	24.305
Mg	
Magnesium	

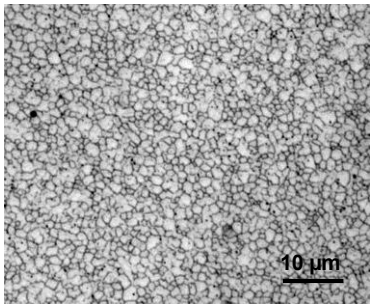
30	65.380
Zn	
Zinc	

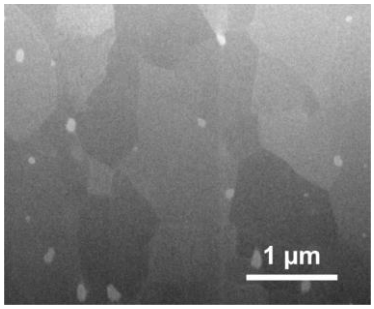
20	40.078
Ca	
Calcium	

ECAP Mg-Zn-Ca

Description	composition [wt%]				
	Zn	Ca	Mn	Fe	Mg
Lean absorbable Mg-Zn-Ca alloy	0.45 - 0.55	0.55 - 0.65	<0.005	<0.005	bal.

The lean Mg-Zn-Ca alloy consists only of elements that are naturally present in the human body and is ideal for temporary, absorbable medical implants. ECAP Mg-Zn-Ca produced with a special double ECAP tool offers a wide range of mechanical properties. The degradation behavior is slow and uniform in all cases.





- excellent biocompatibility
- uniform degradation in body fluids
- tuneable mechanical properties
- **excellent strength & ductility**
- excellent homogeneity

Condition	Mechanical properties (minimum values)			
	Rm [MPa]	$Rp_{0.2}$ [MPa]	A [%]	HV [HV2]
extruded	255	225	20	58
D-ECAP – high strength	**350**	**340**	**5**	**78**
D-ECAP – balanced strength & ductility	**290**	**280**	**20**	**69**

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