

..... in the Service of Science

GROM services, prompt and quickly responding

GROM Column-packing service.

GROM has established a long-standing reputation for highest quality and reliability in the field of column packing. In the **GROM** laboratories, the majority of the stationary phases available world-wide, in particular those from all recognized manufacturers (see table below), are expertly packed in the unique **NovoGROM** column hardware. On request, **GROM** will also pack columns with stationary phases supplied by the customer.

All these stationary phases, plus each of the **GROM Sil** phases (listed on pages 12 / 13) are routinely packed by the **GROM** column packing service:

Trade name/ Manufacturer		Stationary phase type																			
		C18	C18B	PS/DVB	C8	C8B	C6	Phenyl	C4	C1	Nitrile	Amino	Nitro	Diol	SAX/SB	SCX/SA	WAX	WCX	Si	Chiral	
AGP	Chromtech																				●
u-Bondapak	Waters	●					●			●	●									●	
Capcell	Shiseido	●			●		●		●	●	●										
Eurospher	Knauer	●			●				●		●			●	●	●				●	
GROM-SIL	Grom	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●
Hypersil	Thermo Quest	●	●		●	●		●	●	●	●			●						●	
Intersil	GI-Science	●			●			●												●	
Kromasil	Eka-Nobel	●			●				●	●										●	
LiChrosorb	Merck	●			●				●	●	●			●						●	
LiChrospher	Merck	●			●	●				●	●			●						●	
Nucleosil	Machery-Nagel	●	●		●			●		●	●			●	●	●				●	
Partisil	Whatman	●			●					●	●			●	●					●	
Polygosil	Machery-Nagel	●			●						●	●	●							●	
PRP	Hamilton			●										●	●						
Purospher	Merck	●																			
Spherisorb	Waters	●	●		●		●	●	●	●	●			●	●					●	
Superspher	Merck	●			●																
Synchropak	Micra Scientific	●			●				●	●				●	●	●	●	●	●	●	●
Vydac	The Separations Group	●			●			●	●												
YMC	YMC	●	●		●	●		●	●	●	●			●						●	
Zorbax	Agilent Technologies	●	●		●	●		●	●	●	●			●	●					●	

GROM Column-refill service

The routine short delivery time of 24 - 48 hours applies in particular to the **GROM** column-refill service. On request, column hardware from other manufacturers can also be refilled with the above listed stationary phases. This economical refilling service is available for microbore, analytical and preparative columns.

GROM Preparative-service

Preparative chromatographic purifications of customers products, including chiral separations, on a mg up to gram scale are offered by the reliable and prompt **GROM** preparative-service. Detailed information available on request.

for analytical and preparative

High Performance Liquid Chromatography

The palette of **GROM** packed HPLC columns ranges from 100 µm capillaries of 5 mm length to 10 cm diameter preparative columns with a length of 100 cm.

NovoGROM capillaries, microbore and analytical columns in the standard dimensions (200, 300, 500 and 800 µm, 1, 2, 3, 4 and 4.6 mm i.d.) packed with any of the stationary phases listed below are available from stock. Orders for HPLC columns are routinely shipped within 48 hours.

NovoGROM HPLC columns huge variety of standard column dimensions

	Length	Inner diameter (mm)																			
		<0,3	0,3	0,5	0,8	1	2	3	4	4,6	8	10	16	20	30	40	50	60	75	100	
guard column-cartridges*	5		◆	◆	◆	◆	◆	◆	◆	◆											
	10		◆	◆	◆	◆	◆	◆	◆	◆	◆			◆							
	20		◆	◆	◆	◆	◆	◆	◆	◆	◆			◆	◆						
	30														◆						
	40								◆	◆											
	50																				
columns and cartridges	20					◆	◆	◆	◆	◆					◆						
	25												◆								
	30		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆						
	40	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
	50	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	60	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆						
	75	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
	100	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
	125	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	150	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
	200	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆						
	250	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	300	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	500					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
1000										◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	

*guard column head or holder required.

Custom analysis service (Environmental, biopharmaceutical and drug analysis)

Environmental analysis

We offer the following environmental analyses:

Matrix:

Drinking water, industrial water, waste water, ground water, soil, sludges, core samples.

- 6 PAH's (old TVO protocoll)
- 16 PAH's (new TVO protocoll)
- Anions
- Cations
- Organic acids
- Atrazine and related pesticides
- Phenols, halophenols and nitrophenols
- Carbamate pesticides and herbicides
- Urea-based pesticides and herbicides

We also offer a customized method development service for all types of samples. Please inquire.

Biopharmacy

The following biopharmaceutical analyses are offered:

Matrix:

Whole blood, serum, plasma, urine, lacrimal fluid, saliva, seminal fluid, vaginal secretions, organ and tissue samples, bone, cell cultures, skin permeates, erythrocytes, microsomes, etc., from both human and animal sources.

- Validated methods for approx. 300 drugs (German Red List of Pharmaceuticals)
- Custom method development for specific samples
- Adaptation of customer's methods to routine methods
- Enantiospecific separation of drugs
- Analysis of drug metabolites
- Determination of drug-concentration levels in samples from patients
- Bioavailability of phytopharmaceuticals
- Determination of anions and cations in human and animal samples
- Determination of phenols, PAH's, CHC's and PC
- Isolation of metabolites from plasma or urine on a preparative scale

Pharmaceutical analysis

We offer the following pharmaceutical analyses:

- Analyses according to DAB 9, DAC 1986, HAB 1 and other pharmacopoeas
- Method development and validation of customer-specific analyses
- Adaptation of customer's methods to routine methods
- Determination of the enantiomeric composition of racemates
- Isolation and identification of drug metabolites
- Method development for analysis of phytopharmaceuticals
- Isolation and identification of phytopharmaceuticals
- Development and improvement of galenic preparations
- Stability analysis
- Editing of drug approval applications

Note!
Due to safety regulations we are not authorized to accept shipments of any viral- or radioactive contaminated sample.

Other Tradenames and Manufacturers

of well accepted Stationary Phases for HPLC

Adsorbosphere	Alltech	Kovasil	Uetikon
Alltima	Alltech	Luna	Phenomenex
Aminex	Biorad	MCI	Mitsubishi
Apex	Jones	Microsorb	Rainin
Aquapore	Brownlee / PE	PartiSphere	Whatman
Aquasil	Keystone	Pecosphere	Brownlee / PE
Asahipak	Shodex	Pecosil	Brownlee / PE
Bakerbond	Baker	Phenogel	Phenomenex
BetaSil	Keystone	PhenoSphere	Phenomenex
Chiracel	Daicel / Chiral Technologies	Platinum	Alltech
Chiralpak	Daicel / Chiral Technologies	Pigel	PolymerLab
Chirobiotic V	Astec	PLRP-S	PolymerLab
Chromegabond	E. S. Industries	PolyEncap	Bischoff
Cosmosil	Nacalai Tesque	Prism	Keystone
Crownpak	Daicel / Chiral Technologies	Prodigy	Phenomenex
Cyclobond	Astec	Progel	Supelco
Deltabond	Keystone	ProntoSil	Bischoff
Deltapak	Waters	Protein-Pak	Waters
Develosil	Nomura Chemical	Resolve	Waters
Discovery	Supelco	Rexchrome	Regis
Dynamax	Rainin	Rezex	Phenomenex
Econosphere	Alltech	Coregel	Sarasep
Econosil	Alltech	Spheri	Brownlee / PE
Envirogel	Waters	Styragel	Waters
Genesis	Jones	Sumichiral	Sumika Chemical
HALsil	Higgins Analytical	Supelcosil	Supelco
Hydropore	Rainin	Super ODS, Octyl	TosoHaas
Hypercarb	Thermo Quest	Suplex	Supelco
Hyperprep	Thermo Quest	TSK	TosoHaas
HyPurity Advance	Thermo Quest	Ultrasphere	Beckmann Coulter
HyPurity Elite	Thermo Quest	Ultremex	Phenomenex
Jordi	Jordi	Velosep	Brownlee / PE
Jupiter	Phenomenex	Versapak	Alltech

GROM, a leader in filling and manufacturing HPLC columns, is a worldwide renowned expert, specialized in packing of **Microbore** and **Capillary Columns**.

HPLC- packing materials from other manufacturers

In addition to **GROM** stationary phases, the **GROM** column packing service and **GROM** refill service also pack analytical and preparative columns with materials from other internationally renowned

manufacturers. On the following pages, we list our contract partners and the materials which we pack in either **NovoGROM** hardware or columns of other producers.

μBondapak® - Waters (Milford, MA, USA)

A well proven phase from the pioneer of HPLC manufacturers.

Packing material	Order no.	Particle size (μm)	Pore size (Å)
μBondapak C18	BS Od 1*	10	120
μBondapak Phenyl	BS PH 1*	10	120
μBondapak CN	BS CN 1*	10	120
μBondapak NH ₂	BS NH 1*	10	120
μBondapak Porasil (Si)	BS NP 1*	10	120

* Please add abbreviation (see pages 160 and 161) for particle size, pore diameter, column hardware type and column dimensions.

Packing Materials

μBondapak® - Waters (Milford, MA, USA)

Packing material	Order no.	Particle size (μm)	Pore size (Å)
Nova-Pak C18	BS OD 5*	4	60
Nova-Pak C8	BS OC 5*	4	60
Nova-Pak CN	BS CN 5*	4	60
Nova-Pak Phenyl	BS PH 5*	4	60
Nova-Pak Si	BS NP 5*	4	60
Symmetry C18	BS OD 3*	3.5, 5	100
Symmetry Shield RP18	BS OD 4*	3.5, 5	100
Symmetry300C18	BS OD 3*	5	300
Symmetry C8	BS OC 2*	3.5, 5	100
Symmetry Shield RP8	BS OC 3*	3.5, 5	100
Symmetry300C8	BS OC 2*	5	300
Symmetry300C4	BS BU 2*	5	300

Capcell PAK® - Shiseido (Kyoto, J) Quality products from Far East

Packing material	Order no.	Particle size (μm)	Pore size (Å)
CAPCELL PAK SG C18	CS OD 1*	3, 5	120, 300
CAPCELL PAK SG C8	CS OC 1*	5	120, 300
CAPCELL PAK SG Phenyl	CS PH 1*	5	120, 300
CAPCELL PAK SG C1	CS TM 1*	5	120,300
CAPCELL PAK SG CN	CS CN 1*	5	120
CAPCELL PAK SG NH ₂	CS NH 1*	5	80
CAPCELL PAK AG C18	CS OD 2*	5	120
CAPCELL PAK AG C8	CS OC 2*	5	120
CAPCELL PAK UG C18	CS OD 3*	3, 5	120, 300
CAPCELL PAK UG C8	CS OC 3*	5	120
CAPCELL PAK UG Phenyl	CS PH 3*	5	120
CAPCELL PAK UG C1	CS TM 3*	5	120
CAPCELL PAK UG CN	CS CN 3*	5	120
CAPCELL PAK UG NH ₂	CS NH 3*	5	120

Eurosphere® - Knauer (Berlin, FRG) Quality phases "Made in Germany"

Packing material	Order no.	Particle size (μm)	Pore size (Å)
Eurosphere C18	ES OD 1*	5, 7, 10	100
Eurosphere C8	ES OC 1*	5, 7, 10	100
Eurosphere C4	ES BU 1*	7	100
Eurosphere C1	ES TM 1*	7	100
Eurosphere CN	ES CN 1*	7	100
Eurosphere NH ₂	ES NH 1*	7	100
Eurosphere Diol	ES OH 1*	7	100
Eurosphere Si	ES NP 1*	3, 5, 7, 10	100
Eurosphere Bioselect C18	ES OD 2*	7, 10	300
Eurosphere Bioselect C8	ES OC 2*	5, 7, 10	300

Hypersil® - Thermo Quest (Runcorn, UK) Stationary phases featuring high mechanical stability and reproducibility.

Packing material	Order no.	Particle size (μm)	Pore size (Å)
Hypersil ODS	HS OD 1*	3, 5, 10	120
Hypersil MOS	HS OC 1*	3, 5, 10	120
Hypersil SAS	HS SA 1*	3, 5, 10	120
Hypersil Phenyl	HS PH 1*	3, 5, 10	120
Hypersil CPS	HS CN 1*	3, 5, 10	120
Hypersil APS (NH ₂)	HS NH 1*	3, 5, 10	120
Hypersil APS 2 (NH ₂)	HS NH 2*	3, 5, 10	120
Hypersil Si	HS NP 1*	3, 5, 10	120, 300
Hypersil Octyl-WP	HS OC 1*	5, 10	300

* Please add abbreviation (see pages 160 and 161) for particle size, pore diameter, column hardware type and column dimensions.

Packing Materials

Hypersil® - Thermo Quest (Runcorn, UK) Stationary phases featuring high mechanical stability and reproducibility.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Hypersil Butyl-WP	HS BU 1 *	5, 10	300
Hypersil BDS C18	HS OD 2 *	3, 5	130
Hypersil BDS C8	HS OC 2 *	3, 5	130
Hypersil BDS Phenyl	HS PH 2 *	3, 5	130
Hypersil BDS CN	HS CN 2 *	3, 5	130

Inertsil® - GL-Science (Tokyo, J) Packing materials with high chemical stability

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Inertsil ODS 80	IS OD 1 *	5	80
Inertsil ODS	IS OD 1 *	5, 10	100
Inertsil ODS-2	IS OD 2 *	5	150
Inertsil ODS-3	IS OD 3 *	3, 5	100
Inertsil C8	IS OC 1 *	5	150
Inertsil C8-3	IS OC 3 *	3, 5	150
Inertsil C4	IS BU 1 *	5	150
Inertsil Phenyl	IS PH 1 *	5	150
Inertsil Phenyl-3	IS PH 3 *	3, 5	150
Inertsil CN-3	IS CN 3 *	5	150

Kromasil^T M - Eka Nobel (Göteborg, S)

Packing materials which guarantee high resolution, reproducibility and stability.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Kromasil C18	KS OD 1 *	3.5, 5, 10	100
Kromasil C8	KS OC 1 *	3.5, 5, 10	100
Kromasil C4	KS BU 1 *	3.5, 5, 10	100
Kromasil C1	KS TM 1 *	3.5, 5, 10	100
Kromasil NH ₂	KS NH 1 *	3.5, 5, 10	100
Kromasil Si	KS NP 1 *	3.5, 5, 10	100
Kromasil CHI-I	KS CH 1 *	5	100
Kromasil CHI-II	KS CH 2 *	5	100

LiChrosorb® - LiChrospher® - Superspher® - Purospher® - Merck (Darmstadt, FRG)

We pack these tried and tested phases from the worldwide renowned manufacturer of adsorbents not only in our **NovoGROM** hardware, but also in other brands of HPLC columns such as Manufit, LiChrocart-system, etc.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
LiChrosorb RP 18	MS OD 1 *	5, 7, 10	100
LiChrosorb RP 8	MS OC 1 *	5, 7, 10	100
LiChrosorb RP SelectB	MS OC 6 *	5, 10	60
LiChrosorb RP 2	MS DM1 *	7	60
LiChrosorb Nitrile	MS CN 1 *	5, 7, 10	100
LiChrosorb Amino	MS NH 1 *	5, 7, 10	100
LiChrosorb Diol	MS OH 1 *	5, 7, 10	100
LiChrosorb Si	MS NP 1 *	5, 7, 10	60, 100
LiChrospher RP-18	MS OD 2 *	5, 10	100, 300
LiChrospher RP-18 endc.	MS OD 4 *	5, 10	100
LiChrospher RP-8	MS OC 2 *	5, 10	100
LiChrospher RP-8 endc.	MS OC 4 *	5, 10	100
LiChrospher 60 RP select B	MS OC 7 *	5, 10	60
LiChrospher Nitrile	MS CN 2 *	5, 10	100
LiChrospher Amino	MS NH 2 *	5, 10	100
LiChrospher Diol	MS OH 2 *	5, 10	100, 300
LiChrospher Si	MS NP 2 *	5, 10	60, 100, 300, 1000
Superspher C18	MS OD 3 *	4	100
Superspher C18 endcapped	MS OD 5 *	4	100
Superspher C8	MS OC 3 *	4	60

* Please add abbreviation (see pages 160 and 161) for particle size, pore diameter, column hardware type and column dimensions.

Packing Materials

Merck (Darmstadt,FRG)

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Superspher C8 endcapped	MS OC 5 *	4	60
Superspher Silica	MS NP 3 *	4	60
Purospher C18	MS OD P *	5	100
Purospher C18 endcapped	MS OD E *	5	100

Nucleosil® - Macherey & Nagel (Düren, FRG)

One of the widest ranges of HPLC-phases. Supported by extensive application information

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Nucleosil C18	NS OD 1 *	3, 5, 7, 10	50, 100, 120, 300, 500, 1 000
Nucleosil C18 AB	NS OD 0 *	5	100
Nucleosil C18 HD	NS OD 3 *	3, 5	100
Nucleosil C8	NS OC 1 *	3, 5, 7, 10	100, 120, 300, 500
Nucleosil C8 HD	NS OC 3 *	5	100
Nucleosil Protect-1	NS OC 4 *	5	100
Nucleosil Phenyl	NS PH 1 *	5, 7	100, 120, 300, 500, 1 000
Nucleosil C4	NS BU 1 *	5	120, 300, 500, 1 000, 4 000
Nucleosil C2	NS DM 1 *	7	100
Nucleosil CN	NS CN 1 *	5, 7, 10	100, 120, 300, 500
Nucleosil N(CH ₃) ₂	NS NH 3 *	5, 10	100
Nucleosil NO ₂	NS NO 1 *	5, 10	100
Nucleosil NH ₂	NS NH 1 *	5, 7, 10	100, 120
Nucleosil Diol	NS OH 1 *	5, 7	100, 120, 300, 1 000, 4 000
Nucleosil Silica	NS NP 1 *	3, 5, 7, 10	50, 100, 120
Nucleosil SA	NS SC 1 *	5, 10	100
Nucleosil SB	NS SA 1 *	5, 10	100

Partisil® - Whatman (Clifton, NJ, USA)-

These phases are available for special applications.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Partisil ODS 3 (10,5%)	PS OD 3 *	5, 10	90
Partisil ODS 2 (15%)	PS OD 2 *	10	90
Partisil ODS (5%)	PS OD 1 *	10	90
Partisil C8	PS OC 1 *	5, 10	90
Partisil PAC	PS AC 1 *	5, 10	90
Partisil SAX	PS SA 1 *	10	90
Partisil SCX	PS SC 1 *	10	90
Partisil Silica	PS NP 1 *	5, 10	90

PRP® - Hamilton (Reno, NV, USA)

Polymeric phases with excellent separation characteristics and stability; particularly suited for ion chromatography.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
PRP-1	RP OD 1 *	5, 7, 10	75
PRP-3	RP OD 3 *	10	300
PRP-∞	RP OD1 *		4
PRP-X100	RP SA 1 *	10	
PRP-X200	RP SC 2 *	10	
RCX-10	RP RC X *	7	

Spherisorb® - Waters - (Milford, MA, USA)-

Versatile phases with exceptionally high resolution.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Spherisorb ODS 2	SS OD 2 *	3, 5, 10	80
Spherisorb ODS 1	SS OD 1 *	3, 5, 10	80, 300
Spherisorb C8	SS OC 2 *	3, 5, 10	80
Spherisorb C6	SS HE 1 *	3, 5, 10	80, 300
Spherisorb Phenyl	SS PH 1 *	3, 5, 10	80

* Please add abbreviation (see pages 160 and 161) for particle size, pore diameter, column hardware type and column dimensions.

Packing Materials

Spherisorb® - Waters - (Milford, MA, USA)-

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Spherisorb C ₃ WP	SS PR 1 *	5, 10	300
Spherisorb C1	SS TM 1 *	3, 5, 10	80, 300
Spherisorb CN	SS CN 1 *	3, 5, 10	80
Spherisorb NH ₂	SS NH 1 *	3, 5, 10	80
Spherisorb SAX	SS SA 1 *	5, 10	80
Spherisorb SCX	SS SC 1 *	5, 10	80
Spherisorb Silica	SS NP 1 *	3, 5, 10	80, 300

Synchropak® - MICRA Scientific (Northbrook, IL, USA)

The outstanding HPLC phase from the USA

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Synchropak C18	LS OD 1 *	5, 6, 7, 10	100, 300, 1 000, 4 000
Synchropak C8	LS OC 1 *	6, 7	300, 1 000
Synchropak C4	LS BU 1 *	6, 7, 10	300, 1 000, 4 000
Synchropak HIC-Propyl	LS HI 3 *	6	300
Synchropak Q	LS SA 1 *	6	300
Synchropak CM	LS WC 1 *	5, 6	100, 300
Synchropak S	LS SC 1 *	6, 7	300, 1 000
Synchropak AX	LS WA 1 *	5, 6, 7	100, 300, 1 000

Vydac® - Vydac (Hesperia, CA, USA)

Besides the standard materials, the "wide-pore" phases show excellent properties for the separation of biopolymers.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Vydac C18	VS OD 1 *	5, 10	90, 300
Vydac C8	VS OC 1 *	5, 10	300
Vydac C4	VS BU 1 *	5, 10	300
Vydac Diphenyl	VS PH 2 *	5, 10	300
Vydac Si	VS NP 1 *	5, 10	90, 300

Zorbax® - Agilent Technologies (DuPont, resp. Rockland Techn. Inc. / Rockland, DE, USA)

These phases have been renowned for high quality since the introduction of HPLC.

Packing material	Order no.	Particle size (µm)	Pore size (Å)
Zorbax ODS	ZS OD 1 *	5	80
Zorbax C8	ZS OC 1 *	5	80
Zorbax Phenyl	ZS PH 1 *	5	80
Zorbax TMS	ZS TM 1 *	5	80
Zorbax Si	ZS NP 1 *	5	80
Zorbax SCX	ZS SC 1 *	7	300
Zorbax NH ₂	ZS NH 1 *	5	80
Zorbax CN	ZS CN 1 *	5	80
Zorbax SAX	ZS SA 1 *	5	80

* Please add abbreviation (see pages 160 and 161) for particle size, pore diameter, column hardware type and column dimensions.

In addition, GROM also distributes the following prepacked Columns:

Zorbax (Agilent Technologies):

Rx, SB, EclipseXDB, Bonus RP, Extend, Bio Series, Ultron ES-OVM

Vydac

201TP, 208TP, 214TP, 218TP, 228TP, 201/208HS, 259VHP, 238TP, 401TP

Chrom Tech AB

AGP, CBH, HSA

TosoHaas

All TosoHaas products are available from GROM. We will be pleased to send you a catalogue upon request.

YMC

These phases are available in NovoGROM hardware. Please inquire for the catalogue.