

Investigator™ Duracryl™ High-Tensile Strength Acrylamide and Standard Acrylamide

Duracryl and standard acrylamide are supplied as mixed, liquid stock solutions that can be stored unopened at 4°C for up to one year. The total monomer (%T) to cross-linking agent (%C) ratios are consistent from package to package for reproducible electrophoresis runs.

Duracryl is compatible with standard mass-spectrometry processing protocols.

The standard acrylamide is high purity 2-D electrophoresis grade for use in any general purpose application that does not require the high-tensile strength of Duracryl.

Part Number	Size	Product	Application(s)
0070-3924	100 mL	Duracryl 30% (30T, 2.2C)	<ul style="list-style-type: none"> Any protein electrophoresis slab gels. Improves resolution and gives rounder spots in higher MW proteins of 2-D gels.
0080-0085	1 L	Duracryl 30% (30T, 2.2C)	
		<i>30% (w/v) acrylamide/0.65% (w/v) bis-acrylamide solution</i>	
0080-0147	100 mL	Duracryl 30% (30T, 2.6C)	<ul style="list-style-type: none"> Analytical IEF tube gels Preparative IEF tube gels Any protein electrophoresis slab gels to improve tensile strength
0080-0148	1 L	Duracryl 30% (30T, 2.6C)	
		<i>30% (w/v) acrylamide/0.8% (w/v) bis-acrylamide solution</i>	
0080-0152	100 mL	Duracryl 40% (40T, 5C)	<ul style="list-style-type: none"> DNA sequencing slab gels
0080-0153	1 L	Duracryl 40% (40T, 5C)	
		<i>38% (w/v) acrylamide/2 % (w/v) bis-acrylamide solution</i>	
0080-0084	1 L	Acrylamide 30% (30T, 2.6C)	<ul style="list-style-type: none"> Any protein electrophoresis slab gels. Analytical IEF tube gels
		<i>30% (w/v) acrylamide/0.8% (w/v) bis-acrylamide solution</i>	
0080-0150	100 mL	Acrylamide 40% (40T, 5C)	<ul style="list-style-type: none"> DNA sequencing slab gels
0080-0151	1 L	Acrylamide 40% (40T, 5C)	
0080-0211	603 g	Acrylamide 200:1 (5/pk)	<ul style="list-style-type: none"> Any protein electrophoresis slab gels.
0080-0154	1000 g	Acrylamide powder	
0080-0155	100 g	Bis-acrylamide powder	

Use Duracryl 30% (30T, 2.6C) to produce gels with a higher degree of tensile strength and monochromism than standard acrylamide. Use Duracryl 30% (30T, 2.2C) to obtain a gel with rounder, high-intensity spots in the high MW region, but with slightly less tensile strength and monochromism than Duracryl 30% (30T, 2.6C).

HAZARDS:

- **Unpolymerized acrylamide is a neurotoxin.**
- **Polymerize all unused acrylamide prior to disposal.**
- **Always wear gloves when handling Duracryl or acrylamide.**
- **Do not mouth pipette solutions.**

Shelf Life:

- Store unused Duracryl and acrylamide stock solutions at 4°C. They will be stable for 1 year.
- Dilute stock solutions just prior to use.
- Use diluted stock solutions within 90 days.

For Best Results:

- Use fresh 18 M Ω water to ensure low conductivity solutions.
- Use high-purity reagents (tris, urea, detergent).
- De-gas stock solutions prior to adding catalyst.
- Make the ammonium persulfate catalyst solution immediately prior to use to ensure efficient polymerization.
- Refer to the 2-D Casting and Running System manual for complete casting protocols.

Analysis

<u>Specification</u>	<u>Duracryl</u>	<u>Standard Acrylamide</u>
Conductivity	< 5.0 μ S/cm	< 5.0 μ S/cm
Acrylic Acid	<0.0005%	<0.0005%
Chloride	<0.0002%	<0.0002%
Fluoride	<0.0002%	<0.0002%
pH	5.5-7.0	5.5-7.0
Iron	<0.0001%	<0.0001%
Lead	<0.0001%	<0.0001%
Magnesium	<0.0001%	<0.0001%
Storage	4°C	4°C
Packaging	100 mL or 1000 mL bottles wit PTFE seals	100 mL or 1000 mL bottles wit PTFE seals

Ordering information for other available reagents

<u>Part Number</u>	<u>Size</u>	<u>Product</u>
0080-0242	1 L	Gel Casting Buffer-Tricine chemistry (pH 7.0)
0080-0083	1 L	Gel Casting Buffer-Laemmli chemistry (pH 8.8)
0080-0080	100 g	SDS
0080-0175	1000 g	SDS
0080-0173	100 g	Ammonium Persulfate [7727-54-0]
0080-0090	25 g	Ammonium Persulfate [7727-54-0]
0080-0088	5 mL	TEMED [110-18-9]
0080-0174	25 mL	TEMED [110-18-9]
0080-0176	10 g	Octyl β -D Glucopyranoside
0080-0177	50 g	Octyl β -D Glucopyranoside
0080-0073	10 g	CHAPS
0080-0072	100 mL	Triton X-100
0080-0178	1 L	Triton X-100
0080-0017	100 mL	Colloidal Coomassie Blue
0080-0216	1 L	Colloidal Coomassie Blue
0070-3995	1 L	SYPRO Ruby Protein Gel Stain
0080-0219	5 L	SYPRO Ruby Protein Gel Stain
0080-0183	Each	Silver Stain Kit (enough for 10 single gels)

Casting volume requirements for large format (22 cm x 22 cm x 1 mm) gels:

Amount (in mL) to cast 6 single or 4 double gels-Tricine chemistry

<u>Component</u>	<u>7.5%</u>	<u>10%</u>	<u>12.5%</u>	<u>15%</u>
Duracryl 30%	168	224	280	336
Gel Casting Buffer-Tricine chemistry	67	67	67	67
18 M□ water	428	372	316	260
10% SDS	6.8	6.8	6.8	6.8
TEMED	0.34	0.34	0.34	0.34
10% APS	1.46	1.46	1.46	1.46
Total Volume	671	671	671	671

Amount (in mL) to cast 6 single or 4 double gels-Laemmli chemistry

<u>Component</u>	<u>7.5%</u>	<u>8%</u>	<u>10%</u>	<u>12.5%</u>	<u>15%</u>
Duracryl 30%	168	178	224	280	336
Gel Casting Buffer-Laemmli chemistry	166	166	166	166	166
18 M□ water	329	319	274	218	162
10% SDS	6.4	6.4	6.4	6.4	6.4
TEMED	0.34	0.34	0.34	0.34	0.34
10% APS	1.7	1.7	1.7	1.7	1.7
Total Volume	671	671	671	671	671

Amount (in mL) to cast 11 single or 7 double gels-Tricine chemistry

<u>Component</u>	<u>7.5%</u>	<u>10%</u>	<u>12.5%</u>	<u>15%</u>
Duracryl 30%	319	426	532	639
Gel Casting Buffer-Tricine chemistry	127	127	127	127
18 M □ water	814	708	602	495
10% SDS	12.9	12.9	12.9	12.9
TEMED	0.64	0.64	0.64	0.64
10% APS	2.77	2.77	2.77	2.77
Total Volume	1277	1277	1277	1277

Amount (in mL) to cast 11 single or 7 double gels-Laemmli chemistry

<u>Component</u>	<u>7.5%</u>	<u>8%</u>	<u>10%</u>	<u>12.5%</u>	<u>15%</u>
Duracryl 30%	319	340	426	532	639
Gel Casting Buffer-Laemmli chemistry	315	315	315	315	315
18 M □ water	627	607	521	414	308
10% SDS	12.1	12.1	12.1	12.1	12.1
TEMED	0.64	0.64	0.64	0.64	0.64
10% APS	3.2	3.2	3.2	3.2	3.2
Total Volume	1277	1277	1277	1277	1277

Note: High molecular weight proteins are best resolved with 7.5% Duracryl, low molecular weight proteins with 15%. Use 10-12.5% for most whole cell lysate applications.