

"Crushing" Lysis Efficiency - Nothing Resists It!

40秒内裂解任何坚硬或者冷冻的样品

FastPrep® System

样品快速制备系统

- 市场上唯一可更换的适配器
- 拥有针对不同样品的优化试剂与整合纯化试剂盒

- 最先进，快速与高通量的抽提DNA、RNA和蛋白质



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FastPrep®-24 Instrument Ultra-Rapid, Thorough Homogenization

Lyse Any Tough or Frozen Sample In 40 Seconds



MP公司最新款FASTPREP-24新增可编程功能，可最多编辑五个最常用程序。从BIO101系统发展到最近闻名的高通量样品制备系统，全球有6000多用户。FASTPREP-24提供一种独一无二的均质方法，通过这种方法无论多坚硬的样品都能在40秒内快速一致的被裂解。

相对于传统的均质方法如旋涡，针筒抽吸法，用研钵研磨液氮冻过的样品，使用FASTPREP-24系统可以节省数个小时的样品准备时间，并且能更有效的保存DNA、RNA、蛋白质的完整，更高效率的提取样品。

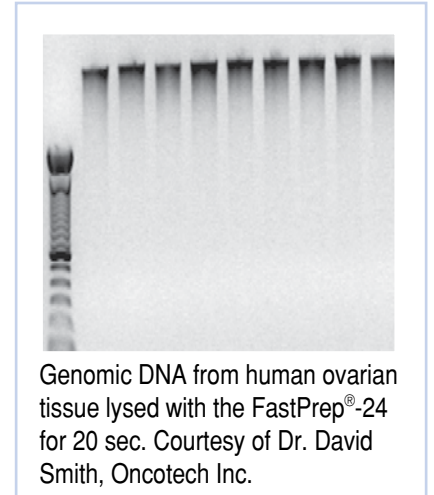
FastPrep-24用一种独特的最优化的运动方式，利用特殊

的小珠同时多个不同方向的撞击来破碎细胞，是至今最多功能的均质机，备有各种不同的适配器，24tube*2ml, 48tube*2ml, 12tube*15ml, 2tube*50ml,满足客户不同的需求。

FastPrep-24专门应用于难处理的样品，它能快速彻底的裂解各种组织细胞，可重复分离稳定的RNA，有活性的蛋白，全长的基因组DNA。

作为一个完全独立的系统，FastPrep-24不存在交叉污染，同时也省去手动方法清洁的时间。简单的将样品与缓冲溶液加入带有特殊小珠的样品管内就可以了。FastPrep-24人性化的设计更方便样品放入，并在均质过程中样品管是安全密封的。均质的速度和时间由数码控制，确保每次实验结果的一致性。只要轻触按钮设定好时间与速度，按 RUN，在 40秒内就可完成您的实验。

独特的多角度的运动方式，可让小珠同时从各个方向撞击样品释放核酸，蛋白到有保护作用的缓冲液中，比其它任何系统都快。



Genomic DNA from human ovarian tissue lysed with the FastPrep®-24 for 20 sec. Courtesy of Dr. David Smith, Oncotech Inc.

离心后上清被收集进行进一步的纯化。

各种不同应用的Lysing Matrix管内包含有不同材质不同尺寸不同形状的小珠子，这些包含有小珠子的Lysing Matrix管已被精心制作反复验证确保彻底破碎不同来源的样品，如细菌、真菌、酵母、植物样品（包括种子）、昆虫、动物组织（骨、皮肤、脑、肿瘤），以及培养的细胞。

高效的FastPrep纯化试剂盒与FastPrep-24仪器相结合，为任何来源的样品释放纯化提取完整的DNA、RNA、蛋白提供简单，方便，有效的方法。

FastPrep®-24

一仪器可处理所有您的样品

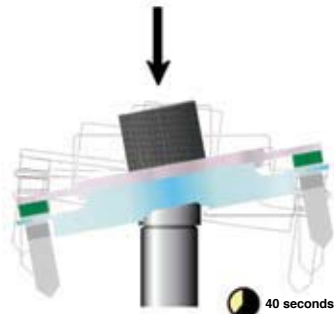
最先进，快速，彻底抽提DNA，RNA，蛋白质

Overview of the FastPrep®-24 Procedure

Cells and lysing buffer



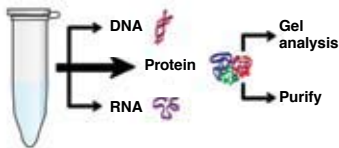
1. Prepare lysis tube



2. Process with FastPrep®-24 Instrument



3. Centrifuge to pellet debris



4. Transfer cleared lysate

- 可轻易均质难处理的样品
- 市场上唯一一个可随意更换适配器的系统，可选适配器 24x2ml; 48x2ml; 12x15ml; or 2x50ml samples
- 精确的时间与速度设定保证了实验的高重复性 有五个预设程序
- 单个样品管可消除交叉污染
- 全套样品准备试剂盒，可抽提纯化DNA. RNA. 蛋白质



可有效裂解的样品:

- 骨头、脑、肿瘤
- 革兰氏阳性菌和阴性菌
- 酵母、真菌、孢子
- 种子、根
- 粪便、土壤



NEW EASY-TO-USE PROGRAMMABLE INSTRUMENT!

Save up to 5 pre-sets that you use most, with specific combinations of speed and time.

Cat. #	Description	Price
6004500	FastPrep®-24 Instrument	

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FastPrep®-24

市场上唯一一个可更换适配器的系统

QuickPrep™ Adapter

24 x 2 ml samples

标配

New

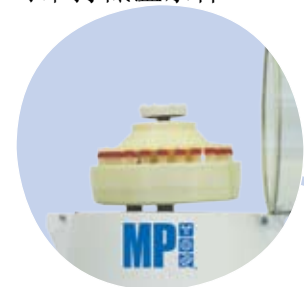
CryoPrep™ Adapter

24 x 2 ml samples

可维持低温条件

TeenPrep™ Adapter

12 x 15ml samples



HiPrep™ Adapter

48 x 2ml samples

BigPrep™ Adapter

2 x 50 ml samples

FastPrep -24适配器人性化的设计更加方便裂解介质管 (Lysing matrix tubes) 放入，在均质过程中裂解管一直保持密封状态保证样品安全不被污染。FastPrep -24所有的适配器都在平稳站立在实验台上，并可作为管架放入加好样的裂解管整个贮存于-20°C或者-80°C。取出后几乎不用处理可立即用在FastPrep -24仪器上均质。而新款的CryoPrep适配器可在整个均质过程中让样品处在-80°C的环境。

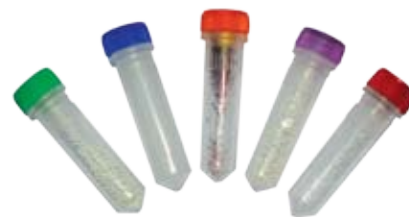
Cat. #	Description
6002-512	QuickPrep™ Adapter
6002-525	BigPrep™ Adapter
6002-526	TeenPrep™ Adapter
6002-527	HiPrep™ Adapter
6002-528	CryoPrep™ Adapter

方便的裂解介质管（Lysing Matrix Tubes）满足各种需求

MP Biomedicals guarantees the BEST performance from your FastPrep®-24 Instrument when used in combination with FastPrep Lysing Matrix Tubes

介质（Matrices）是FastPrep样品制备系统中的关键组成部分

您即可以选择单独的介质（Matrices）与您自己独特的缓冲液结合使用，也可选择整套的纯化试剂盒方便您的实验。



New Easy Dispenser Box for all Matrix Kits of 100 and 500 Tubes

Cat. #	Description	Pack size
6910-050	Lysing Matrix A	50 x 2 ml Tubes
6910-100	Lysing Matrix A	100 x 2 ml Tubes
6910-500	Lysing Matrix A	500 x 2 ml Tubes
6911-050	Lysing Matrix B	50 x 2 ml Tubes
6911-100	Lysing Matrix B	100 x 2 ml Tubes
6911-500	Lysing Matrix B	500 x 2 ml Tubes
6912-050	Lysing Matrix C	50 x 2 ml Tubes
6912-100	Lysing Matrix C	100 x 2 ml Tubes
6912-500	Lysing Matrix C	500 x 2 ml Tubes
6913-050	Lysing Matrix D	50 x 2 ml Tubes
6913-100	Lysing Matrix D	100 x 2 ml Tubes
6913-500	Lysing Matrix D	500 x 2 ml Tubes
6914-050	Lysing Matrix E	50 x 2 ml Tubes
6914-100	Lysing Matrix E	100 x 2 ml Tubes
6914-500	Lysing Matrix E	500 x 2 ml Tubes
6750-200	BioPulverizer™ System I (10 tubes each of 6910-6914)	50 x 2 ml Tubes



Lysing Matrix A

每个抗冲击的2ml管中有深红色研磨粉和一个1/4英寸的陶珠。还有提供单独包装的陶珠。Lysing Matrix A管是橘红色盖子，是FastDNA试剂盒组成之一。Lysing Matrix A可用于除土壤以外任何样品的DNA提取。



Lysing Matrix B

每个抗冲击的2ml管中有0.1mm的小硅球。Lysing Matrix B管是蓝色盖子，是FastRNA Pro Blue试剂盒的组成之一，用于裂解革兰氏阳性菌和革兰氏阴性菌



Lysing Matrix C

每个抗冲击的2ml管中有1.0mm的硅球。Lysing Matrix C管是红色盖子，是Fast RNA Pro Red试剂盒的组成之一，用于裂解酵母和真菌



Lysing Matrix D

每个抗冲击的2ml管中有1.4mm的小陶珠。Lysing Matrix D管是绿色盖子，是Fast RNA? Pro Green试剂盒的组成之一，用于动植物的总RNA分离。

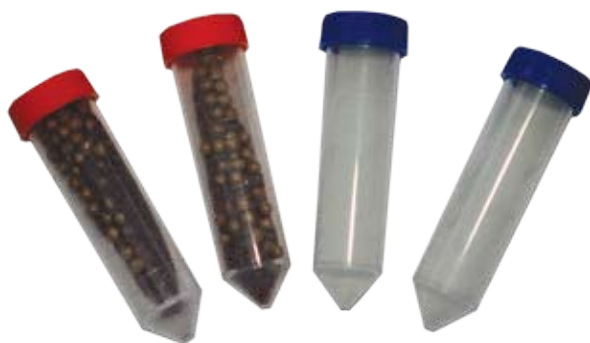


Lysing Matrix E

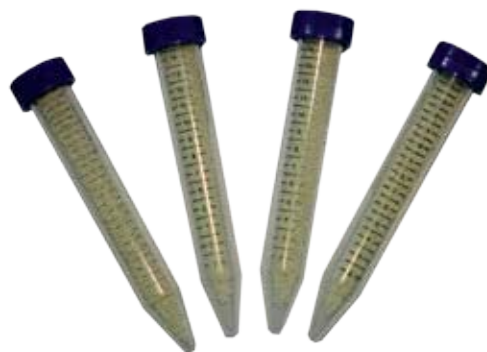
每个抗冲击的2ml管中有1.4mm的小珠陶、0.1mm的小硅球和一个4mm的玻璃珠。Lysing Matrix E管是紫色盖子，是Fast DNA SPIN土壤抽提试剂盒的组成之一，用于土壤或环境生物学研究中各种样品的DNA、RNA分离

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50ml Lysing Matrix Tubes



15ml Lysing Matrix Tubes

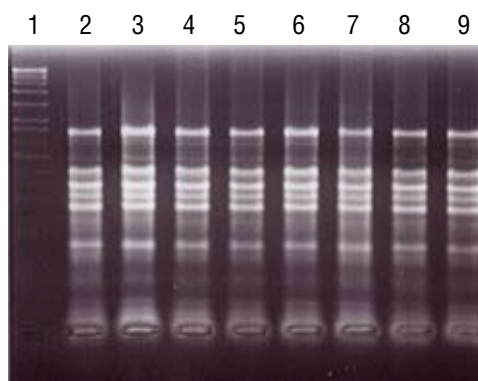


Cat. #	Description	Pack size
6950-010	BigA - Lysing Matrix Tubes	10 x 50ml Tubes
6950-050	BigA - Lysing Matrix Tubes	50 x 50ml Tubes
6951-010	BigB - Lysing Matrix Tubes	10 x 50ml Tubes
6951-050	BigB - Lysing Matrix Tubes	50 x 50ml Tubes
6953-010	BigD - Lysing Matrix Tubes	10 x 50ml Tubes
6953-050	BigD - Lysing Matrix Tubes	50 x 50ml Tubes
6960-010	BigClean - Lysing Matrix Tubes with stainless steel beads	10 x 50ml Tubes
6960-050	BigClean - Lysing Matrix Tubes with stainless steel beads	50 x 50ml Tubes
6954-010	Big E-Lysing Matrix Tubes	10 x 50ml Tubes
6954-050	Big E-Lysing Matrix Tubes	50 x 50ml Tubes

Cat. #	Description	Pack size
6930-050	TeenA - Lysing Matrix Tubes	50 x 15ml Tubes
6931-050	TeenB - Lysing Matrix Tubes	50 x 15ml Tubes
6932-050	TeenC - Lysing Matrix Tubes	50 x 15ml Tubes
6933-050	TeenD - Lysing Matrix Tubes	50 x 15ml Tubes
6934-050	TeenE - Lysing Matrix Tubes	50 x 15ml Tubes



RNA Extraction From Basil Leaves



Line 1. Marker
 Line 2. 1x40sec. with FastPrep® FP120 Instrument
 Line 3. 2x40sec. with FastPrep® FP120 Instrument
 Line 4. 3x40sec. with FastPrep® FP120 Instrument
 Line 5. 1x40sec. with FastPrep® 24 Instrument
 Line 6. 2x40sec. with FastPrep® 24 Instrument
 Line 7. 3x40sec. with FastPrep® 24 Instrument
 Line 8. 1x40sec. with FastPrep® FP120 Instrument
 Line 9. 1x40sec. with FastPrep® 24 Instrument

50mg of basil leaves were homogenized with the FastPrep®-24 or FastPrep® FP120 Instrument. One, two or three runs of 40 seconds were performed at a speed setting of 6.0 m/s and RNA was extracted with the FastRNA® Pro Green Kit.

Ready-to-use Protocols for DNA, RNA and Protein Isolation from Any Sample!

A Wide Range of FastPrep® Kits

- 快速的、可重复的样品裂解纯化过程
- 封闭的样品管无交叉污染
- 提高了RNA, DNA, 蛋白的产量与质量
- 保存DNA, RNA, 蛋白的完整与大小
- 核酸与蛋白可应用于下游的研究

FastDNA® Spin Kit for Soil

Cat No. 6560-200 (50 preps)

- 适用于土壤以及各种环境样品
- 不需要有害的有机试剂

FastProtein™ Blue Matrix

Cat No.6550-400(50 preps)

Cat No.6550-500(100 prep)

- 40内释放革兰氏阴性菌阳性菌蛋白
- 蛋白提取物可马上用于电泳或纯化

DNA

PROTEIN

FastPrep® Kits

RNA

FastRNA® Pro Green Kit

Cat No.6045-050(50 preps)

- 适用于任何动物植物的样品
- 每2ml管子裂解50-100 mg的组织

FastDNA® Kit FastDNA® Spin Kit

Cat No.6540-400(100 preps)

Cat No.6540-600(100 preps)

- 适用于植物, 动物, 酵母, 真菌和微生物样品
- 无需有害的有机试剂

FastRNA® Pro Red Kit

Cat No.6035-050(50 preps)

- 适用于酵母, 真菌
- 每2ml管子可裂解 10^{10} 的细胞

FastRNA® Pro Soil-Direct Kit FastRNA® Pro Soil-Indirect Kit

Cat No.6070-050(50 preps)

Cat No.6075-050(50 preps)

- 适用于土壤以及各种环境样品
- 在提取过程中提RNA保护
- 腐酸减少到可进行RT-PCR水平
- 包括额外试剂可用于进一步的纯化

FastRNA® Pro Blue Kit

Cat No.6025-050 (50 preps)

- 适用于革兰氏阴性菌阳性菌
- 每2ml管子可裂解 10^{10} 的细胞

FastProtein™ Red Matrix

Cat No.6550-600 (50 preps)

Cat No.6550-700 (100 preps)

- 40内释放酵母真菌蛋白
- 蛋白提取物可直接用于电泳或纯化

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FastDNA® SPIN Kit

一种快速分离纯化各种不同来源样品DNA的方法

- 使用FastPrep -24系统可快速重复样品裂解实验结果
- 分离的各种不同类型样品DNA都可用于PCR
- 无需有害的有机试剂

The FastDNA SPIN Kit试剂盒可快速有效的分离几乎任何样品的DNA（植物动物组织，细胞、细菌、酵母、真菌、昆虫）。每个Lysing Matrix A管最多可处理200mg的组织或细胞。试剂盒为各种不同的样品类型提供了三种不同的缓冲液，释放的DNA被硅柱纯化。纯化的DNA可用于酶切，电泳，PCR和其它任何你想要的应用。

References

1. Hill J.E. et al (2005). Appl.Environ.Microbiol. Vol 71 : 867-875
2. Moon H. et al (2004). J.Exp.Bot. Vol 55 : 1519-1528
3. Dionisi H.M. et al (2004). Appl.Envir.Microbiol. Vol 70 : 3988-3995

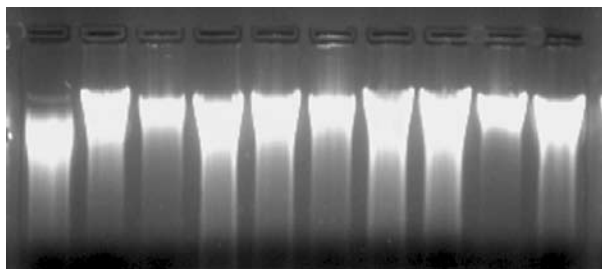
Cat #	Designation	Pack Size
6540-600	FastDNA® SPIN Kit	100 Preps

FastDNA® SPIN Kit For Soil

分离纯化土壤或其它环境样品中生物体的DNA

- 使用FastPrep -24系统可快速重复样品裂解实验结果
- 可容易分离许多不同类型土壤中各种有机体的DNA
- 无需有害的有机试剂

The FastDNA SPIN 土壤试剂盒可有效的从土壤或环境样品中分离细菌、真菌、植物、动物的基因DNA。每个Lysing Matrix E样品管最多可处理500 mg土壤。Lysing Matrix E用于有效的裂解各种微生物包括难处理的真菌孢子和孢子内壁、革兰氏阳性菌、细菌、酵母。释放的DNA硅柱纯化后可用于PCR分析以及其它下游应用。



DNA from various soil samples extracted with the FastDNA® SPIN Kit for Soil. 20% of the DNA isolated from 500mg soil was loaded on a 1.2% agarose gel (0.5X TAE). Soil was taken from: Lane 1: tomato pot; Lane 2 : sludge; Lane 3 : sandy soil; Lane 4 : under pine tree; Lane 5 : under palm tree; Lane 6 : green garden; Lane 7 : Nile Lilly pot; Lane 8 : lawn grass; Lane 9 : citrus tree; Lane 10 : avocado tree. DNA ranges from 4-20 kb.

References

1. Selesi D. et al (2005). Appl. Envir. Microbiol. Vol 71 : 175-184
2. Alexandrino M. et al (2004). Water Research. Vol 38 : 1340 - 1346
3. Mumy K.L. et al (2004). J. of Microbiological Methods. Vol 57 : 259 – 268

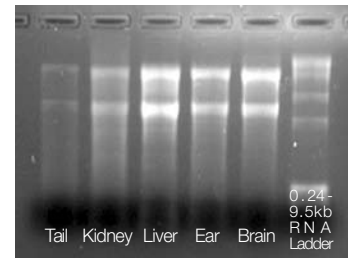
Cat #	Designation	Pack Size
6560-200	FastDNA® SPIN Kit for Soil	50 Preps

FastRNA® Pro Kits

用单一试剂抽提的方法分离高质量总RNA

- 使用FastPrep -24系统可在40内快速重复样品裂解实验结果
- 使用单个RNAPro溶液安全的分离RNA
- 裂解纯化总RNA

The FastRNA Pro Kits设计用于快速有效的分离各种样品总的RNA。在处理过程中，完整的RNA被释放在RNAPro溶液中，在RNAPro溶液中RNA能马上稳定下来。RNAPro溶液的功能是在裂解过程中灭活胞内RNA酶防止RNA降解。接下来用氯仿抽提RNA，再用酒精沉淀后。DEPC处理过的的水来重悬总RNA。用FastRNAPro 试剂盒制备的高质量RNA可用于所有的下游实验包括RT-PCR，基因表达，microarray分析。



Rat total RNA extracted with the FastRNA® Pro Green Kit. Approximately 2% of the total RNA isolated from 100 mg frozen tissue was loaded on to a 1.2% denaturing agarose gel (1X MOPS).

Cat #	Designation	Pack Size
6025-050	FastRNA® Pro Blue Kit (bacteria)	50 Preps
6035-050	FastRNA® Pro Red Kit (yeast and fungi)	50 Preps
6045-050	FastRNA® Pro Green Kit (plants and animals)	50 Preps

References

1. Vido K. et al (2005). J. Bacteriol. Vol 187 : 601-610
2. Tsai H.F. et al (2004). Antimicrob. Agents Chemoth. Vol 48 : 2483 – 2489
3. Tupin E. et al (2004). J. Exp. Med. Vol 199 : 417 -422

FastRNA® Pro Soil Kits

从土壤中分离总RNA可直接用于RT-PCR和其它下游应用

- 使用FastPrep -24系统可在40内快速重复样品裂解实验结果
- 可轻松的直接裂解在土壤中的革兰氏阳性菌，植物材质，和有机碎片
- 在处理过程中裂解与纯化所用的溶液可以保护RNA
- 腐殖酸水平被减低到可做RT-PCR水平
- 裂解纯化总RNA

FastRNA Pro Soil-Direct and Indirect kits 用于有效的分离在土壤或土壤表层物中有机物的总RNA。

直接的方法是直接从土壤中抽提微生物或土壤中其它生物体的核酸。间接的方法是先从土壤中分离微生物或其它生物体，接下来再裂解有机体纯化RNA。如果不需要进行微生物多样性比较，这种方法也允许土壤孵育在培养基中，目的是在RNA分离前先扩增生命有机体。FastRNA Pro Soil kits中有一步骤是去除腐殖酸和其它抑制物，在均质过程中有效的灭活细胞内的RNA酶，阻止RNA降解。纯化的RNA适用于RT-PCR和其它任何下游应用。

Cat #	Designation	Pack Size
6070-050	FastRNA® Pro Soil-Direct Kit	50 Preps
6075-050	FastRNA® Pro Soil-Indirect Kit	50 Preps

裂解微生物释放组蛋白

FastProtein™ Matrix

- 节省样品裂解时间只要数秒解决问题
- 在不同的时间点不同的条件下可快速一致的裂解样品
- 蛋白提取物可直接用于电泳或纯化

在几分钟内可制备数打蛋白样品

FastProtein产品使用了强大的专利技术去裂解细菌与酵母。与FastPrep -24仪器结合使用，提供了最快从宿主机体释放表达蛋白的方法。

样品在快速的裂解步骤中一直是密封的，因此不会出现交叉污染或都样品丢失的情况。

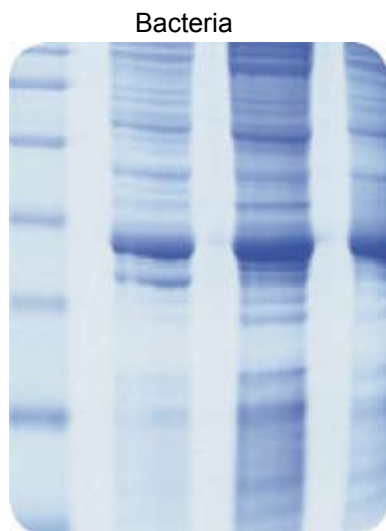


Figure 1
12% SDS PAGE of lysate of BL21 cells expressing the GST protein resulting from homogenization with the FastProtein™ Blue Matrix

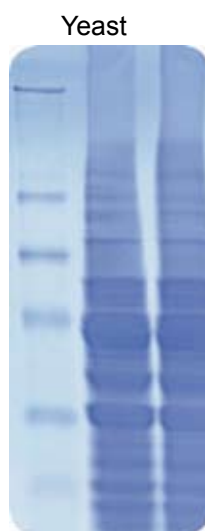


Figure 2
12% SDS PAGE of lysate of yeast cells resulting from homogenization with FastProtein™ Red.

FastProtein™ Blue (裂解革兰氏阴性阳性菌)



The FastProtein Blue matrix是最适于裂解革兰氏阴性阳性菌。这些细小的玻璃球专门设计用于革兰氏菌或其它难处理的微生物。细胞重悬在1X PBS或你自己的蛋白缓冲液中，加到 Lysing Matrix管中，在FastPrep-24中均质20到40秒即可。

FastProtein™ Red (裂解酵母)



The FastProtein Red matrix用于裂解酵母细胞。细胞重悬在酵母破碎缓冲液中或其它您自己的蛋白缓冲液，再加入到带小玻璃珠的样品管中，放入FastPrep-24仪器中均质20到40秒即可。

Cat. #	Description	Size
6550-400	FastProtein™ Blue Matrix	50 x 2ml
6550-500	FastProtein™ Blue Matrix	100 x 2ml
6550-600	FastProtein™Red Matrix	50 x 2ml
6550-700	FastProtein™Red Matrix	100 x 2ml

Table of Typical FastPrep® Systems Settings for Optimal Sample Lysis

Sample Name	Sample Type	Quantity	Lysing Matrix	FastPrep® speed	FastPrep® time
HUMAN AND ANIMAL					
Human	Lung	50 mg	Lysing Matrix D	6.0	4x 30 sec.
Human	Breast	80 mg	Lysing Matrix D	6.0	2x 30 sec.
Human	Kidney	50 mg	Lysing Matrix D	6.0	40 sec.
Human	Thyroid Tumors	100 mg	Lysing Matrix A	6.0	3x 30 sec.
Mouse	Eye	10 mg	Lysing Matrix D	6.0	4x 30 sec.
Mouse	Heart	70 mg	Lysing Matrix D	6.0	4x 30 sec.
Mouse	Kidney	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Femur	40 mg	Lysing Matrix A	6.0	4x 30 sec.
Mouse	Leg Muscle	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Intestine	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Ear	45 mg	Lysing Matrix D	6.0	4x 30 sec.
Mouse	Tail	100 mg	Lysing Matrix A	6.0	4x 30 sec.
Mouse	Spleen	70 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Lung	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Liver	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Brain	50 mg	Lysing Matrix D	6.0	40 sec.
Mouse	Pancreatic cells (bHC9)	10 ⁷ cells	Lysing Matrix D	6.0	40 sec.

PLANT					
Alpowa Wheat	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.
Alpowa Wheat	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Arabidopsis thaliana	Fresh Leaves	50 mg	Lysing Matrix D	6.0	40 sec.
Arabidopsis thaliana	Fresh Leaves	200 mg	Lysing Matrix D	6.0	2x 40 sec.
Bartlett Pear	Leaf Tissue	50 mg	Lysing Matrix D	6.0	40 sec.
Classic Oat	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.
Classic Oat	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Corn	Leaf Tissue	100 mg	Lysing Matrix D	6.0	40 sec.
Crest Barley	Leaf Tissue	100 mg	Lysing Matrix D	6.0	40 sec.
Crest Barley	Root	300 mg	Lysing Matrix A	6.0	40 sec.
Kaybonnet Rice	Leaf Tissue	100 mg	Lysing Matrix D	6.0	40 sec.
Kaybonnet Rice	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Klages Barley	Root	300 mg	Lysing Matrix A	6.0	40 sec.
Klages Barley 70 mg Leaf Tissue 6.0 40 seconds	Leaf Tissue	70 mg	Lysing Matrix D	6.0	40 sec.
Tobacco	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.

Table of Typical FastPrep® Systems Settings (continued)

Sample Name	Sample Type	Quantity	Lysing Matrix	FastPrep® speed	FastPrep® time
PLANT					
Lafitte Rice	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.
Lafitte Rice	Sprout Leaf	100 mg	Lysing Matrix D	6.0	2x 30 sec.
Soybean	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Corn	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Oat FL 502	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.
Oat FL 502	Seed	100 mg	Lysing Matrix A	6.0	40 sec.
Riser Oat	Leaf Tissue	70 mg	Lysing Matrix D	6.0	40 sec.
Richland Soybean	Leaf Tissue	100 mg	Lysing Matrix D	6.0	40 sec.
Tam Wheat	Leaf Tissue	75 mg	Lysing Matrix D	6.0	40 sec.
Tam Wheat	Root	80 mg	Lysing Matrix A	6.0	40 sec.
Tomato, Early Girl	Leaf Tissue	75 mg	Lysing Matrix D	6.0	4 x 30 sec.
Williams 82 Soybean	Leaf Tissue	70 mg	Lysing Matrix D	6.0	40 sec.
Wrens Rye	Leaf Tissue	100 mg	Lysing Matrix D	6.0	40 sec.
Pine	Needle	100 mg	Lysing Matrix A	6.0	30 sec.

BACTERIA					
Listeria monocytogenes	Cells	10 ⁹ cells	Lysing Matrix B	6.0	3x 30 sec.
Streptococcus pyogenes	Cells	10 ⁹ cells	Lysing Matrix B	6.0	20 sec.
Streptococcus mutans	Cells	10 ⁹ cells	Lysing Matrix B	6.0	30 sec.
Staphylococcus aureus	Cells	10 ⁸ cells	Lysing Matrix B	6.0	2x 40 sec.
Photobacterium luminescens	Cells	10 ⁹ cells	Lysing Matrix B	6.0	2x 30 sec.
Escherichia coli	Cells	10 ⁸ cells	Lysing Matrix B	6.0	30 sec.
Mycobacterium tuberculosis	Cells	10 ⁸ cells	Lysing Matrix B	6.0	2x 45 sec.
Lactococcus lactis	Cells	10 ⁸ cells	Lysing Matrix B	6.0	3x 30 sec.

YEAST AND FUNGI					
Saccharomyces cerevisiae	Cells	2x 10 ⁸ cells	Lysing Matrix C	6.0	40 sec.
Schizosaccharomyces pombe	Cells	10 ⁸ cells	Lysing Matrix C	5.0	4x 15 sec.
Candida albicans	Cells	10 ⁸ cells	Lysing Matrix C	6.0	2x 30 sec.
Cryptococcus neoformans	Cells	10 ⁸ cells	Lysing Matrix C	6.0	4x 30 sec.
Aspergillus fumigatus	Cells	10 ⁸ cells	Lysing Matrix C	6.0	2x 30 sec.
Fusarium solani	Cells	10 ⁸ cells	Lysing Matrix C	6.0	2x 30 sec.

ENVIRONMENTAL SAMPLES					
Sediments	Soil/rocks	50 mg	Lysing Matrix E	5.5	2x 30 sec.
Soil	Sandy sample	50 mg	Lysing Matrix E	4.0	4x 30 sec.
Soil	Litter	50 mg	Lysing Matrix E	5.5	30 sec.
Feces	Turd	300 mg	Lysing Matrix E	6.0	40 sec.





FastPrep®-24 Applications Questions and Answers



是否可以用FastPrep -24系统从动物组织中分离病毒颗粒？

FastPrep -24系统可用于从动物或植物组织中分离病毒颗粒，研究人员一般用Lysing Matrix A来实现这一应用。Lysing Matrix A包括深红色的介质和一个陶珠，如果移除深红色的介质只用一个陶珠，20秒 6.5 m/s动物细胞被裂解但没有病毒，这就说明病毒的蛋白衣壳还是完整的。

Reference: Klempa B. et al. (2005)

J.Clin.Microbiol. Vol 43(6); 2756-2763.

用FastRNA Pro Kits分离RNA，有什么特别的建议在避免RNA的降解？

RNA降解的根源来自RNA酶的活性，无论的内源的还是外源的。

1) 灭活内源RNA酶

在取组织和细胞时胞内的内源RNA酶会立即被释放出来。尽可能的灭活这些RNA酶是阻止RNA降解的关键。为了有效的灭活RNA酶，取样后尽快加入RNApro溶液，并立即进行均质处理。或者将样品放入液氮速冻。速冻前应把组织切成小块(1cm)，以便能快速的彻底的冰冻整个组织块，阻止RNA降解。

2) 减少暴露在外源RNA酶中

为了分离完整高质量的RNA，不要在RNA纯化过程中导入RNA酶是关键。与纯化相关的任何事务应该是无RNA酶。所有的表面包括移液枪，实验台，玻璃器皿和凝胶设备都应该用表面净化溶液（如RNase Erase Cat # 2440204）净化。所有用的枪头、管子、溶液、手套都应该是无RNA酶，而且要经常更换。

用BigPrep适配器裂解酵母应设定什么时间与速度

FastPrep-24仪器结合BigPrep适配器已成功的裂解过Pichia Pastoris一种有非常厚壁的酵母。离心一升的培养液重悬在50 ml裂解缓冲液中。两个Lysing Matrix B大管可放25ml，6.0 m/s速度30秒均质四次。每次均质间隔间隙应将样品放在冰上孵育两分钟。80%的酵母能被裂解。

可不可以用FastPrep-24系统从石蜡包埋的组织中分离RNA？

组织样品常用于显微和组化分析，因此常被保存包埋在石蜡中。分离石蜡包埋的组织，我们建议在均质之前用二甲苯去除石蜡。

材料:二甲苯、酒精 (100%, 95%, 70%)、蒸馏水、玻璃缸或其它容器

步骤:

a. 切5-10微米的蜡片

b. 将蜡片放入42°水浴中去除折叠和皱折

c. 将蜡片放在玻璃片上，在室温下过夜凉干。如果蜡片没有贴在玻片上，可在42°孵育至多8小时。

d. 将有组织片的玻片放在以下溶液中溶解

二甲苯 5分钟 — 二甲苯5分钟 — 酒精100% 30秒 — 酒精95% 30秒 — 酒精, 70% 30秒 — dH2O 30秒

成功处理皮肤样品推荐用什么设定

20mg皮肤样品放在有800ml缓冲液的Lysing Matrix A管内。样品应在6.0 m/s均质20秒四次。每次间隔要用冰孵育两分钟。

Lysing Matrix能不能耐溶剂，可不可以贮存在-20°或 -80°

所有的管和珠子都耐化学药剂（酸，碱，溶剂）。所有Lysing Matrix都可贮存在-20°或 -80°

FastPrep -24是否可以处理头发样品用于法医毒理分析？

FastPrep -24仪器与12*15ml适配器相结合已成功的裂解头发样品用于毒理分析。将头发样品加到15ml的Lysing Matrix管中，管中包括有8个大陶珠和4个钢珠，样品在6.0 m/s速度下50秒均质两次。均质后，在粉末状均质物中加入甲醇用于抽取毒物。

对于处理量少的动物和植物组织样品（少于10mg）建议。

对于处理少于10mg的样品，要在处理前先从Lysing Matrix D管中拿出一半陶珠。样品在6.0 m/s速度下处理30秒即可。

FastPrep-24系统是否适用于裂解孢子？

Coloured scanning electron micrograph (SEM) of *Bacillus anthracis* spores

细菌和真菌孢子无论是培养的还是从环境样品中取得都能用FastPrep-24成功裂解，枯草芽孢杆菌孢子重悬在Lysing Matrix B管中，6.0 m/s、40秒，三次，在每两次间隔中都要进行一分钟的冰浴。通过显微镜检测确认有98%的孢子裂解。Hudson K.D.等(J. Bacteriol.(2005), Vol 183: 4317-4322)用这个系统从枯草芽孢杆菌孢子中分离蛋白质用于Western Blotting分析。Keijser B.J.F.等(J. Bacteriol (2007), Vol 189: 3624-3634)用FastRNA Pro Blue Kit试剂盒从培养的枯草芽孢杆菌孢子中分离总RNA，并将这些总RNA用逆转录，标记以及微芯片的原位杂交。

炭疽热是一个最危险的传染病，80多年前就用于生物武器。由于土壤中腐殖酸和其它许多可生成孢子和不可生成孢子的细菌存在，从土壤中检测到炭疽热DNA是非常困难的。使用FastDNA SPIN Kit土壤试剂盒，从1克人为污染有炭疽杆菌孢子的土壤中分离DNA。嵌套式和实时PCR的实验结果显示，通过这种快速高灵敏的方法可以检测到炭疽杆菌。(Cheun H.I.et al. J.Appl. Microbiol. (2005) Vol 95: 728-733).

两篇文献（如下）记录了使用FastDNA SPIN Kit土壤试剂从细菌和真菌的孢子中抽提DNA，甚至是土壤和深海淤泥样本中的孢子。纯化的DNA可用于半嵌入式PCR，DGGE分析。

Roesti D.et al. (Appl. Environ. Microbiol (2005),Vol 71: 6673-6679)

Mincer T.J. et al. (Appl. Environ. Microbiol (2005),Vol 71: 7019-7028)

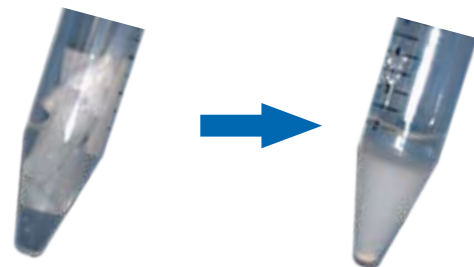
FastPrep -24系统是否已经用于从蓝绿藻中分离DNA？

蓝绿藻也称为蓝细菌，FastPrep -24系统已成功裂解。文献Crosbie N.D. et al. (Appl. Environ. Microbiol. (2003), Vol 69: 5716-5721) 和 Steward G.F. et al.(App. Environ. Microbiol. (2004), Vol70: 1455-1465) 报道了用FastPrep -24系统裂解蓝绿藻用于抽提DNA。Crosbie N.D用FastDNA SPIN Kit来抽提的蓝藻DNA，用于PCR扩增。Steward G.F等将蓝藻悬在酚氯仿溶液中加入到Lysing Matrix B管中，速度6.0 m/s 10秒两次。接下来分离纯化DNA保存于TE中用于PCR实验。

*Synechococcus cyanobacteria*

如何用FastPrep -24系统从空气过滤器中分离过敏原？

UCI已采用FastPrep -24系统快速高通量从PM2.5空气过滤器中抽提内毒素。很简单，将石英过滤器放入去有去内毒素的管子，加入去热原的水，在FastPrep -24仪器上速度6.5 m/s处理30秒。接下来放管子转动器(Dynal Biotech)转一个小时。用LAL(Limulus Amoebocyte Lysate)动力发光分析。同时用没用过的过滤器做一个阴性对照实验。在一套16个样本中，我们检测到14个样本中有内毒素，大约在0.03 - 5.5 EU/mL，平均值为0.73 EU/mL。阴性样品未检出内毒素。



处理前

Quartz filter folded into the 15 ml tube in a TeenPrep adapter

处理后

Quartz filter lysate after FastPrep lysing with no additional lysing matrix, for 30 seconds at 6.5 m/s speed settings

Yes!

- Please send me more information on FastPrep!
 I am ready for a demonstration, call me (_____) _____

Simply fill out and fax back, or submit online, and RECEIVE A FREE GIFT

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 Government Hospital/Medical Center
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My primary field of work:

- Molecular Biology Biotechnology
 Pharmaceuticals Pathology
 Clinical Chemistry Environmental
 Medical/Biological/Clinical Forensics/Narcotics
 Plastics/Polymers/Rubber Agricultural/Foods/Beverage
 Energy/Petroleum Food and Beverages
 Inorganic Chemicals Organics Chemicals
 Other (explain) _____

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 Drugs Discovery Biopharmaceutical
 Chemical Manufacturer In Vitro Diagnostics Manufacturer
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 Group Purchasing Integrated Health Network
 Physician Office Lab Reference Lab
 Other (explain) _____

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