

## Deuterated products 核磁用氘代试剂

氘代溶剂广泛应用于化学研究领域，对于分析有机物分子结构的重要方法—核磁共振波谱法是不可缺少的。核磁共振是非破坏性的,信息量丰富的分析技术，它能够帮助研究人员了解分子的结构和动态。核磁共振实验可以提供原子同其它分子中的原子的关联信息，包括分子的空间取向，譬如它在三维空间是如何折叠或扭转的；以及在自然环境中它在分子内是如何运动的。这样的结构信息非常重要，特别是在蛋白质组学/染色体组学和药物研究领域。科学家渴望更加深入的了解蛋白质中目标分子和它们与合成药物选择物的空间关系。



### 分析哪类产品会用到核磁共振

包括简单化合物常规鉴定(例如，用200兆赫光谱)，以及合成实验室第一次得到的复杂分子结构的鉴定(例如，用600兆赫光谱)。在科学出版物中，几乎所有新发现的产物都会提供相应的核磁共振波谱。

样品通过所用方法的对应标准物(通常是四甲基硅烷TMS, 产品编号：108183)测定，它通常被直接加入溶剂中 (内标物)。

### 对氘代溶剂有那些要求？

核磁共振波谱对所用溶剂的氘代度反应敏感。如用200兆赫光谱，使用氘代度在99.5% - 99.8%之间的氘代溶剂就足够了，如果提高的设备等级, 例如, 600 兆赫光谱，那就需要更高氘代度的溶剂。

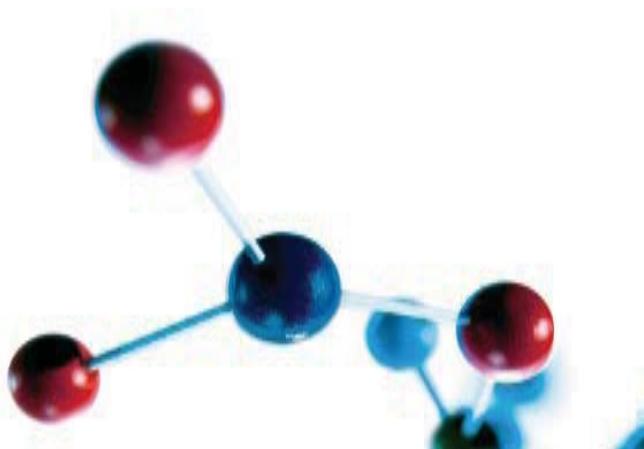
核磁共振波谱仪正向更高的性能和分辨率发展, 因而对高质量溶剂的需求更加迫切了。

### 默克氘代溶剂给您带来的好处

能够让您得到可靠的核磁共振波谱：

- 优秀化学纯度和最高的同位素填充度；
- 可靠的氘代度；
- 两种方式测定含水量（卡尔费休滴定法和NMR方法）

可方便安全使用的隔膜瓶和玻璃安瓿瓶





# 实验室分析试剂 Laboratory Analytical Reagents

## 订货信息

名称	气度 [%]	H <sub>2</sub> O+D <sub>2</sub> O (KF) [%]	H <sub>2</sub> O (NMR) [%]	密度 20°C [g/ml]	包装	含量 [g]	产品编号
A Acetic acid-D1 99.5 % D 氘代乙酸-D1	>99.5	-	-	1.06	25 ml bottle 50 ml bottle	26.50 53.00	8.15035.0025 8.15035.0050
Acetic acid-D4 99.5 % 氘代乙酸-D4	>99.5	< 0.05		1.12 1.12	10 x 0.75 ml ampoule 10 ml ampoule 50 ml bottle	8.40 11.20 56.00	8.15036.0009 8.15036.0010 8.15036.0050
Acetone-D6 99.9% D 氘代丙酮-D6	>99.9	< 0.03	< 0.02	0.87	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml septum bottle 25 ml bottle 100 ml bottle	4.35 6.53 8.70 21.75 87.00	1.00021.0005 1.00021.0009 1.00021.0010 1.00021.0025 1.00021.0100
Acetone-D6 99.96% D 氘代丙酮-D6	>99.96	< 0.03	< 0.02	0.87	10 x 0.75 ml ampoule	6.53	1.11969.0009
Acetonitrile-D3 99 % D 氘代乙腈-D3	>99	< 0.10	< 0.05	0.84	10 ml septum bottle	8.40	1.02904.0010
Acetonitrile-D3 99.8 % D 氘代乙腈-D3	>99.8	< 0.10	< 0.05	0.84	10 ml septum bottle	8.40	1.00220.0010
Acetonitrile-D3 99.96 % D 氘代乙腈-D3	>99.96	< 0.02	< 0.01	0.84	1 ml bottle 10 x 0.75 ml ampoule	0.84 6.30	1.13753.0001 1.13753.0009
Acetophenone-D8 98 % D 氘代苯乙酮-D8	>98	-	-	1.10	5 ml ampoule 10 ml ampoule	5.50 11.00	8.15006.0005 8.15006.0010
Acetyl chloride-D3 99 % D 氘代乙酰基氯-D3	>99	-	-	1.15	10 ml ampoule	11.50	8.15007.0010
Ammonia-D3 26 wt % in D2O 氘代氨水-D3	>99.5	-	-	1.06	10 ml ampoule 25 ml bottle	10.60 26.50	8.15008.0010 8.15008.0025
Ammonium acetate-D3 (CD <sub>3</sub> COO) 99% D 氘代醋酸铵-D3	>99	-	-	-	5 g bottle	5.00	8.15009.0005
Ammonium acetate-D7 98 % D 氘代醋酸铵-D7	>98	-	-	-	5 g bottle	5.00	8.15010.0005
Ammonium bromide-D4 99 % D 氘代溴化铵-D4	>99	-	-	-	5 g bottle	5.00	8.15011.0005
Ammonium chloride-D4 99 % D 氘代氯化铵-D4	>99	-	-	-	5 g bottle	5.00	8.15012.0005
B Benzene-D6 99.6% D 氘代苯-D6	>99.6	-	< 0.02	0.95	10 x 0.75 ml ampoule 10 ml septum bottle 100 ml bottle	7.13 9.50 95.00	1.01789.0009 1.01789.0010 1.01789.0100
Benzene-D6 99.96% D 氘代苯-D6	>99.96	-	-	0.95	10 x 0.75 ml ampoule 10 ml ampoule	7.13 9.50	1.01766.0009 1.01766.0010
Bromobenzene-D5 99.5 % D 氘代溴化苯-D5	>99.5	-	< 0.02	1.54	10 ml ampoule	15.40	8.15021.0010
n-Butanol (ol-D) 99 % D 氘代正丁醇	>99	-	-	0.82	25 ml bottle	20.50	8.15013.0025
tert-Butanol (ol-D) 99 % D 氘代叔丁醇	>99	-	-	0.80	25 ml bottle	20.00	8.15014.0025
n-Butanol-D10 99.5 % 氘代正丁醇-D10	>99.5	-	-	0.92	5 ml ampoule	4.60	8.15022.0005
C Chloroform -D1 99.5% D; 1vol % TMS stabilized with silver 氘代氯仿-D1	>99.5	-	< 0.02	1.50	25 ml bottle 100 ml bottle	37.50 150.00	1.13359.0025 1.13359.0100

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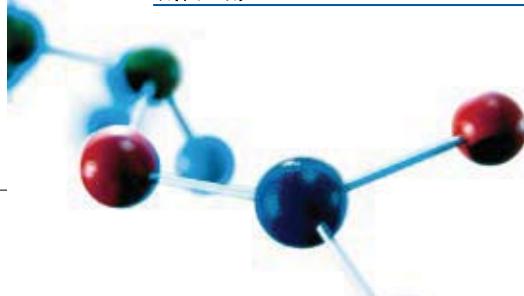
名称	氘度 [%]	H <sub>2</sub> O+D <sub>2</sub> O (KF) [%]	H <sub>2</sub> O (NMR) [%]	密度 20°C [g/ml]	包装	含量 [g]	产品编号
C Chloroform-D1 99.8% D not stabilized 氘代氯仿-D1	>99.8	-	< 0.01	1.50	25 ml bottle 100 ml bottle 500 ml bottle	37.50 150.00 750.00	1.02450.0025 1.02450.0100 1.02450.0500
Chloroform-D1 99.8% D stabilized with silver 氘代氯仿-D1	>99.8	-	< 0.01	1.50	25 ml bottle 100 ml bottle 500 ml bottle	37.50 150.00 750.00	1.03420.0025 1.03420.0100 1.03420.0500
Chloroform-D1 99.8% D; 0.03 % TMS stabilized with silver 氘代氯仿-D1	>99.8	-	< 0.01	1.50	25 ml bottle 100 ml bottle 500 ml bottle	37.50 150.00 750.00	1.03296.0025 1.03296.0100 1.03296.0500
Chloroform-D1 99.96% D 氘代氯仿-D1 25 ml stabilized with silver 100 ml stabilized with silver	>99.96	-	< 0.005	1.50	10 x 0.75 ml ampoule 10 ml ampoule 25 ml bottle 100 ml bottle	11.25 15.00 37.50 150.00	1.02446.0009 1.02446.0010 1.02446.0025 1.02446.0100
Cumol (Isopropylbenzene)-D12 99% D 氘代枯稀-D12	>99	-	-	0.95	1 ml ampoule 5 ml ampoule	0.87 4.35	8.15023.0001 8.15023.0005
Cyclohexane-D12 99.5% D 氘代环己烷-D12	>99.5	< 0.05	< 0.03	0.89	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 5 ml ampoule	4.45 6.68 4.45	8.15024.0005 8.15024.0009 8.15024.0006
Cyclohexanol-D12 99 % D 氘代环己醇-D12	>99	-	-	1.08	1 ml ampoule	1.08	8.15025.0001
D Decahydronaphthalene-D18 99% D 氘代十吐纳麝香-D18	>99	-	-	1.01	1 ml ampoule	1.01	8.15026.0001
n-Decane-D22 99% D 氘代癸烷-D22	>99	-	-	0.85	1 ml ampoule	0.85	8.15027.0001
Deuterium bromide 45 wt % in D <sub>2</sub> O 99% D 溴化氘	>99	-	-	1.54	10 ml ampoule	15.40	8.15015.0010
Deuterium chloride 20 wt % in D <sub>2</sub> O 99.5 % D 氯化氘	>99.5	-	-	1.19	25 ml bottle 50 ml bottle	29.75 59.50	8.15016.0025 8.15016.0050
Deuterium chloride 20 wt % in D <sub>2</sub> O 99.95 % D 氯化氘	>99.95	-	-	1.19	10 ml ampoule 25 ml bottle	11.90 29.75	8.15017.0010 8.15017.0025
Deuterium chloride 38 wt % in D <sub>2</sub> O 99.5 % D 氯化氘	>99.5	-	-	1.26	10 ml ampoule 50 ml bottle	12.60 63.00	8.15018.0010 8.15018.0050
Deuterium iodide 57 wt % in D <sub>2</sub> O 99.5 % D 碘化氘	>99.5	-	-	1.67	10 ml ampoule	16.70	8.15019.0010
Deuterium oxide 99.9% D 重水	>99.9	-	-	1.11	10 x 0.75 ml ampoule 10 ml septum bottle 25 ml bottle 100 ml bottle 500 ml bottle	8.33 11.10 27.75 111.00 555.00	1.13366.0009 1.13366.0010 1.13366.0025 1.13366.0100 1.13366.0500
Deuterium oxide 99.96% D 重水	>99.96	-	-	1.11	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml septum bottle 100 ml bottle	5.55 8.33 11.10 111.00	1.03428.0005 1.03428.0009 1.03428.0010 1.03428.0100
1,4-Dibromobenzene-D4 99 % D 1,4-二溴苯-D4	>99	-	-	-	5 g bottle	5.00	8.15028.0005



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D 1,2-Dichlorobenzene-D4 99% D 1,2-二氯苯-D4	>99	-	< 0.03	1.34	5 ml ampoule	6.70	8.15029.0005
1,4-Dichlorobenzene-D4 98% D 1,4-二氯苯-D4	>98	-	-	-	5 g bottle	5.00	8.15030.0005
Dichloromethane-D2 99.8 % D 二氯甲烷-D2	>99.8	-	< 0.01	1.36	10 x 0.75 ml ampoule 10 ml ampoule	10.20 13.60	1.13720.0009 1.13720.0010
Dichloromethane-D2 99.96 % D 二氯甲烷-D2	>99.96	-	< 0.005	1.36	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml ampoule	6.80 10.20 13.60	1.04200.0005 1.04200.0009 1.04200.0010
Diethylether-D10 99 % D 二乙醚-D10	>99	-	-	0.78	1 ml ampoule 5 ml ampoule	1.00 5.00	8.15031.0001 8.15031.0005
Dimethylacetamide-D9 99 % D 二甲基乙酰胺-D9	>99	-	-	1.03	1 ml ampoule	1.03	8.15032.0001
Dimethylamide-Hydrochloride-D6 x HCl 99.5 % D 二甲基胺-氯化氢-D6	>99.5	-	-	-	10 g bottle	10.00	8.15020.0010
Dimethylcarbonate-D6 99.5 % D 二甲基碳酸酯-D6	>99.5	-	-	1.15	1 ml ampoule	1.15	8.15033.0001
Dimethylformamide-D7 99.5% D 二甲基甲酰胺-D7	>99.5	< 0.05	< 0.03	1.05	1 ml ampoule 10 x 0.75 ml ampoule	1.05 7.88	1.11656.0001 1.11656.0009
Dimethylsulfate-D6 99.5% D 甲基硫酸酯-D6	>99.5	-	-	1.40	5 ml ampoule	7.00	8.15034.0005
Dimethylsulfoxide-D6 99.8% D 氘代二甲亚砜-D6	>99.8	<0.03	<0.02	1.19	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml septum bottle 10 ml ampoule 25 ml bottle 100 ml bottle	5.95 8.93 11.90 11.90 29.75 119.00	1.03424.0005 1.03424.0009 1.03424.0010 1.03424.0011 1.03424.0025 1.03424.0100
Dimethylsulfoxide-D6 99.9% D; 0.1 Vol % TMS 氘代二甲亚砜-D6	>99.9	< 0.03	< 0.02	1.19	25ml bottle 100 ml bottle	29.75 119.00	1.03587.0025 1.03587.0100
Dimethylsulfoxide-D6 99.8% D; 0.03Vol % TMS 氘代二甲亚砜-D6	>99.8	-	-	1.19	100 ml bottle	119.00	1.03591.0100
Dimethylsulfoxide-D6 99.96 % D 氘代二甲亚砜-D6	>99.96	< 0.02	< 0.01	1.19	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml ampoule 25 ml bottle	5.95 8.93 11.90 29.75	1.03562.0005 1.03562.0009 1.03562.0010 1.03562.0025
Dimethylsulfoxide-D6 99.96 % D; 0.03 Vol % TMS 氘代二甲亚砜-D6	>99.96	< 0.02	< 0.01	1.19	5 ml ampoule 25 ml bottle	5.95 29.75	1.03592.0005 1.03592.0025
E Ethanol-D6 99% D 氘代乙醇-D6	>99	< 0.10	< 0.05	0.90	1 ml ampoule	0.90	1.03450.0001



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Ethanol (ol-D) abs 99.5 % D 氘代乙醇	>99.5	-	-	0.80	50 ml bottle 100 ml bottle	40.00 80.00	8.15037.0050 8.15037.0100
Ethylene glycol-D6 99% D 氘代乙二醇-D6	>99	-	-	1.22	1 ml ampoule 5 ml ampoule	1.22 6.10	8.15038.0001 8.15038.0005
F Formic acid-D2 97 wt % in D <sub>2</sub> O 氘代甲酸-D2	>99.5	-	-	1.27	10 ml ampoule	12.70	1.13365.0010
H n-Heptane-D16- 99 % D 氘代正己烷-D16	>99	-	-	0.79	1 ml ampoule 5 ml ampoule	0.79 3.95	8.15039.0001 8.15039.0005
Hexafluoracetone x 1.5 D2O 99.8 % 氘代六氟丙酮	>99.8				1 ml ampoule 5 ml ampoule	1.71 8.55	8.15040.0001 8.15040.0005
Hexafluoro-2-propanol-D2 99.5% D 氘代六氟-2-丙醇-D2	>99.5	-	-	1.65	1 ml ampoule 5 ml ampoule	1.65 8.25	8.15041.0001 8.15041.0005
Hexamethyltriaminophosphine- D18 99.5% D 氘代六甲基三氨基三氢化磷-D18	>99.5	-	< 0.02	1.05	1 ml ampoule 5 ml ampoule	0.90 4.50	8.15042.0001 8.15042.0005
n-Hexane-D14 99% D 氘代正己烷-D14	>99	-	-	0.77	1 ml ampoule 5 ml ampoule	0.77 3.85	8.15043.0001 8.15043.0005
L Lithiumaluminumdeuterid 98 % 氘代锂铝-D4	>98	-	-	-	5 g bottle	5.00	8.15048.0005
M Malonic acid-D4 99.5% D 氘代丙二酸D4	>99.5	-	-	-	25 g bottle	25.00	8.15049.0025
Methylcyclohexane-D14 99.5% D 氘代甲基环己烷-D14	>99.5	-	-	0.88	5 ml ampoule	4.40	8.15053.0005
Methanol (ol-D) 99.5 % D 氘代甲醇	>99.5	-	-	0.81	50 ml bottle 100 ml bottle	40.50 81.00	8.15051.0050 8.15051.0100
Methanol-D4 99.8% D 氘代甲醇-D4	>99.8	< 0.03	-	0.89	1 ml ampoule 10 x 0.5 ml ampoule 10 x 0.75 ml ampoule 10 ml septum bottle 25 ml bottle 100 ml bottle	0.89 4.45 6.68 8.90 22.25 89.00	1.06028.0001 1.06028.0005 1.06028.0009 1.06028.0010 1.06028.0025 1.06028.0100
Methanol-D4 99.95% D 氘代甲醇-D4	>99.95	< 0.02	-	0.89	10 x 0.5 ml ampoule 10 x 0.75 ml ampoule	4.45 6.68	1.06025.0005 1.06025.0009
Methanol-D3 99.5% D 氘代甲醇-D3	>99.5	-	-	0.87	1 ml ampoule 5 ml ampoule	0.87 4.35	8.15052.0001 8.15052.0005
N Naphthalene-D8 98% D 氘萘-D8.	>98	-	-		1g bottle 5 g bottle	1.00 5.00	8.15000.0001 8.15000.0005
Nitric acid-D. 50 wt % in D2O 99% D 氘代硝酸-D	>99	-	-	1.38	5 ml ampoule	6.90	8.15059.0005
Nitrobenzene-D5 99.5 % D 氘代硝基苯-D5	>99.5	-	-	1.25	10 ml ampoule	12.53	8.15001.0010
Nitromethane-D3 99 % D 氘代硝基甲烷-D3	>99	< 0.10	< 0.05	1.18	2 x 0.75 ml ampoule	1.77	1.02914.0002
O n-Octane-D18 99% D 氘代正辛烷-D18	>99	-	-	0.82	1 g ampoule 5 ml ampoule	0.82 4.10	8.15002.0001 8.15002.0005
P Phenol-D6 98 % D 氘代苯酚-D6	>98	-	-	-	1 g bottle 5 g bottle	1.00 5.00	8.15003.0001 8.15003.0005



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P	Phosphoric acid-D3 85 wt % in D <sub>2</sub> O 99% D 氘代磷酸-D3	>99	-	-	1.74	10 ml ampoule	17.40	8.15058.0010
	Potassium deuterium oxide 30 wt % in D <sub>2</sub> O 99.8 % D 氘氧化钾	>99.8	-	-	1.40	25 ml bottle 50 ml bottle	35.00 70.00	8.15047.0025 8.15047.0050
	2-Propanol (ol-D) 98 % D 氘代异丙醇(ol-D)	>98	-	-	0.79	25 ml bottle 100 ml bottle	19.75 79.00	8.15044.0025 8.15044.0100
	2-Propanol-D7 99.5 % D 氘代异丙醇- D7	>99.5	-	-	0.80	1 ml ampoule 5 ml ampoule	20.00 80.00	8.15046.0001 8.15046.0005
	2-Propanol-D8 99.5 % D 氘代异丙醇- D8	>99.5	-	-	0.89	5 ml ampoule	4.45	8.15045.0005
	Pyridine-D5 99.8 % D 氘代吡啶-D5	>99.8	< 0.03	< 0.02	1.05	10 x 0.75 ml ampoule 10 ml septum bottle	7.88 10.50	1.07475.0009 1.07475.0010
S	Sodium acetate-D3 99% D 氘代醋酸钠-D3	>99	-	-		10 g bottle	10.00	8.15054.0010
	Sodium deuterium oxide 30 wt % in D <sub>2</sub> O 99.5 % D 氘氧化钠	>99.5	-	-	1.46	25 ml bottle	36.50	8.15055.0025
	Sodium formiate-D1 99.5 % D 氘代甲酸钠-D1	>99.5	-	-		25 g bottle	5.00	8.15056.0025
	Sulfuric acid-D2 96–98 wt % in D <sub>2</sub> O 硫酸氘-D2	>99.5	-	-	1.88	25 ml bottle 50 ml bottle	47.00 8.15060.0050	
	Styrene-D8 98 % D 氘代苯乙烯-D8	>99	-	-	0.98	1 ml ampoule 10 ml ampoule	0.98 9.80	8.15061.0001 8.15061.0010
T	Terephthalic acid-D4 99% D 对苯二酸-D4	>99	-	-	-	5 g bottle	5.00	8.15062.0005
	Tetrachloroethane-D2 99.5% D 四氯乙烷-D2	>99.5	-	< 0.02	1.62	10 x 0.75 ml ampoule 25 ml bottle	12.15 40.50	1.03495.0009 1.03495.0025
	Tetramethylsilane 四甲基硅	>99.7	-		0.64	100ml bottle	64.00	1.08183.0100
	TMS-Propionic acid-D4-Na 98% D TMS-丙酸钠-D4	>98	-	-	-	1g bottle	1.00	1.08652.0001
	Tetrahydrofuran-D8 99.5% D 氘代四氢呋喃-D8	>99.5	< 0.05	< 0.03	0.99	1 ml ampoule 10 x 0.75 ml ampoule 10 ml septum bottle	0.99 7.43 9.90	1.13364.0001 1.13364.0009 1.13364.0010
	Toluene-D8 99.5% D 氘代甲苯-D8	>99.5	-	< 0.02	0.94	10 ml septum bottle	9.40	1.13368.0010
	Trifluoroacetic acid-D1 99.5 % D 氘代三氟乙酸-D1	>99.5	< 0.05	< 0.03	1.50	10 ml ampoule	15.00	1.13363.0010
X	o-Xylene-D10 99.5% D 氘代二甲苯-D10(间)	>99.5	-	-	0.95	10 ml ampoule	9.50	8.15004.0010
	p-Xylene-D10 99.5% D 氘代二甲苯-D10(对)	>99.5	-	-	0.95	10 ml ampoule	9.50	8.15005.0010