Product line up for in vitro Diagnostics

2nd Edition



70 Years of Achievement

DOJINDO Laboratories was the first manufacturer and seller of Good's Buffers in Japan (in 1968), and since then we have commercialized a number of new products leveraging our technical prowess, including the development of new Trinder's reagent (patent application in 1980; marketed in 1981), and have continued to provide a stable supply of high-quality products to the IVD industry around the world for many years.

Worldwide Distribution We are the Best Backup for You Global Locations

We provide a stable supply according to your needs and reliable service.

We pride ourselves on our testing and research reagents, which are of such high quality that they are used for medical research and quality control purposes. We provide top quality, including providing special specifications according to your needs.

Among the top 35 IVD companies in Japan Business Achievements with 33 Companies!

Why not try our high-quality products?

* See Clinical Laboratory Test Market 2020, Yano Research Institute, Ltd. ISO 9001:2015 certified.

Development History



Representative work: "Chelatometric Titration" (right)

Development of Water Quality Analysis, Colorimetric Reagents and Kits (1951) Keihei Ueno, our founder, is known worldwide for establishing the basic use and application methods of chelates, and since the 1950s we have continued as the first manufacturer and seller of high-quality chelates in Japan.

Starting with EDTA, we continue to develop a wide variety of chelates according to research trends, and based on that know-how, we offer an extensive product lineup, including water quality analysis, development of colorimetric reagents, and much more. In Japan, we are commonly known by the nickname "Chelate Dojindo Laboratories" as a company that supplies high quality chelating reagents.

and Establishment of the Methods of Use (1950)

Development of Chelating Reagents

First Manufacture and Sale of Good's Buffers in Japan (1968)

Our Good's Buffer has been a mainstay product since they were first manufactured and sold on the market in Japan in 1968. They are used as raw materials for clinical diagnostic agents including for test reagents. We have continued to provide a stable supply of products to our customers around the world for many years while flexibly responding to their needs, including quality requirements, in line with quality that is second to none.

Development, Manufacture and Sale of Trinder Reagents (1981)

The Company was the first in the world to develop Trinder reagents. Today, our extensive product lineup consists of more than 10 items, and for over 40 years, we have carried out manufacturing and sale of high-quality Trinder reagents for clinical field companies and manufacturers worldwide.

Development and Manufacture of Detergents (1991)

Our detergents are manufactured and sold for use in membrane protein research that requires extremely high quality, and products that demand the same high quality are supplied to IVD companies, with a record of achievement in satisfaction. We have also assorted an extensive line of products mainly consisting of saccharide chain nonionic detergents as well as including CHAPS and other zwitterionic detergents. We can supply the quantity you need according to your needs.

Development of Immobilized Mediators (2018)

Making use of technology fostered with labeling kits, etc., we have developed a mediator capable of labeling enzymes, etc. Labeling of an oxidoreductase with the mediator improves the electron transfer rate between the oxidoreductase and an electrode. Applications to highly sensitive and highly precise measurements of bio-related materials are thus expected. In this way, we continue to develop and launch products that exceed our customers' expectations and contribute to our customers' product development.



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Oxidative Chromogenic Dyes

New Trinder's Reagents

New Trinder's Reagents, which are highly water-soluble aniline derivatives, are applicable for the colorimetric determination of hydrogen peroxide. In the presence of a coupler such as 4-aminoantipyrine(4-AA), the Trinder's reagents are oxidized with peroxidase and two molecules of hydrogen peroxide and are developing the color to purple or blue.



Product Namo	Product Codo	Cas No	Chromogen(with 4-AA, POD)		
FIGULE Name	FIDUUCI COUE	Cas NO.	λ max(nm)	3	
ADOS	OC01	82692-96-4	542	2.72 x 10 ⁴	
ADPS	OC02	82611-88-9	540	2.79 x 10 ⁴	
DAOS	OC06	83777-30-4	593	1.75 x 10⁴	
HDAOS	OC08	82692-88-4	583	1.73 x 10 ⁴	
MAOS	OC11	82692-97-5	630	2.25 x 10⁴	
TOOS	OC13	82692-93-1	555	3.92 x 10 ⁴	
TOPS	OC14	40567-80-4	550	3.74 x 10 ⁴	
MADB	OC21	209518-16-1	630	1.65 x 10⁴	
TODB	OC22	1044537-70-3	550	3.80 x 10 ⁴	
EMSE	OC46	-	555	-	

Others

Product Name	Product Code	Cas No.	λ max(nm)	3
DAB	D006	7411-49-6	465	1.4 x 10 ⁴
KN-301	K254	-	666	9.0 x 10 ⁴
KN-304	K257	-	666	9.0 x 10 ⁴
SAT-3	S302	679787-07-6	675	7.0 x 10 ⁴
TMBZ	T022	54827-17-7	655	5.4 x 10 ³
TMBZ•HCI	T039	207738-08-7	655	5.4 x 10 ³

Reductive Chromogenic Dyes

Tetrazolium Salts and Electron Mediators (Dehydrogenase system)

Tetrazolium salts have been developed to determine dehydrogenase activity which oxidizes its substrate and reduces its co-enzyme, NAD or NADP and produce NADH or NADPH. The colored formazan dyes are produced upon reduction of NADH in the presence of an electron mediator. To perform the homogenous assay in aqueous condition, Water-Soluble Tetrazolium salts (WST) are widely applied for the diagnostic analysis and life science research due to much improved water-solubility than water insoluble tetrazolium salts, such like NBT and INT.



Prodcut Name	Product Code	Cas No.	λ max(nm)	3
WST-1	W201	150849-52-8	438	3.7 x 10 ⁴
WST-3	W202	515111-36-1	433	3.1 x 10 ⁴
WST-4	W203	178925-54-7	530	1.0 x 10 ⁴
WST-5	W204	178925-55-8	550	2.7 x10 ⁴
WST-9	W217	847986-47-4	490	1.6 x 10 ⁴
MTT	M009	298-93-1	565	2.0 x 10 ⁴
Nitro-TB	N011	298-83-9	530	3.6 x 10 ⁴
ТВ	T012	1871-22-3	525	2.6 x 10 ⁴
WST-8 formazan	W209	193149-76-7	460	3.1 x 10 ⁴

Electron Mediators

PMS (phenazine methosulfate) and Meldola Blue have been used as electron mediators for some time, but they have problems with stability in solution. We offer 1-Methoxy PMS with improved photostability, 1-Methoxy PES that is stable in neutral to alkaline environments, and electron mediators that can be labeled with enzymes, which are expected to be used in the biosensor field.

Product Name	1-Methoxy PMS	1-Methoxy PES	Amine-reactive PES	Thiol-reactive PES
Product Code	M003	M470	A543	T509
Light Stability	0	0	0	0
pH Stability	\bigtriangleup	0	0	0
Conjugation	×	×	NH ₂ group	SH group
Redox Potential (vs. SHE)	168.0 mV	169.5 mV	173.0 mV	162.5 mV

Redox Potential Measurements

Mediator concentration : 1 mmol/L Working electrode : GC (ϕ 3 mm x 55 mm) Counter electrode : Pt (ϕ 0.5 mm x 50 mm) Max scan potential : 400 mV Scan rate : 100 mV/sec Solvent : 0.1 mol/L LiCl/DMS0 Reference electrode : Ag/AgCl (3 mol/L NaCl) Start potential : 400 mV Min. scan potential : -400 mV

Metals in Clinical Chemisty

Metal Indicators

Dojindo offers wide range of reagents that form chelate complex with the target substance in biological sample. These reagents are applicable for quantitative determination of the target substance in the sample.

Product Name	Product Code	Cas No.	Reaction
Chlorophosphonazo-III	C010	1914-99-4	Ca ²⁺
PC(o-Cresolphthalein Complexone)	P004	2411-89-4	Ca ²⁺
3,5-DiBr-PAESA	D041	100743-65-5	Cu⁺
Nitroso-PSAP	N010	80459-15-0	Fe ²⁺
XB-1 (Xylidyl blue)	X001	14936-97-1	Mg ²⁺
5-Br-PAPS	B026	81608-06-2 (free acid)	Zn ²⁺
Nitro-PAPS	N031	143205-66-7 (as anhydride)	Zn ²⁺

Others

Product Name	Product Code	Cas No.	Target
PR (Pyrogallol Red)	P012	32638-88-3	Urinary Total Protein
Glupa-C	G213	63699-78-5	γ -glutamyltransferase
PNPP	N055	333338-18-4 (hexahydrate)	Alkaline phosphatase

Ionophores for ISE (Ion-selective Electrode)

lonophore has a high affinity for a specific ion, and is a reagent for electrically measuring the ion by utilizing the affinity. It is used by mixing it in the electrode membrane.

The anion exclusion agent is a reagent for eliminating the influence of anions on the electrode with respect to the cation electrode. The solvent for a liquid film type ion electrode is a plasticizer for improving ionic responsiveness by mixing with an ion electrode film containing ionophore.

Product Name	Product Code	Cas No.	Target
Bis(benzo-15-crown-5)	B020	69271-98-3	K*
Bis(12-crown-4)	B021	80403-59-4	Na⁺
Bisthiourea-1	B432	187404-67-7	Cl
C14-K22B5	C391	-	Mg ²⁺
Dibenzyl-14-crown-4	D043	106868-21-7	Li ⁺
HDOPP-Ca	H003	52813-66-8	Ca ²⁺
TD19C6	T402	259874-18-5	NH_4^+

TFPB	T037	79060-88-1	Anion Eliminator
HFPB	H209	120945-63-3	Anion Eliminator

Conjugation Tools for Immuno Assay

Protein labeling reagents are used for various assays that are coupled with antigen-antibody reaction. Of these, fluorescent, biotin, and enzyme labeling reagents are used most frequently for antibody labeling. Most protein labeling reagents have similar reactive sites, such as succinimidyl ester (NHS) for amino groups and maleimide or bromoacetamide for sulfhydryl groups. Dojindo offers the following protein labeling reagents and kits for protein research and proteomics.



Filtration Tube with a 30K membrane filter and its molecule separation mechanism.



Product Name	Product Code	Size	Sample quantity	Target group	Conjugation
Peroxidase Labeling Kit-NH ₂	LK11	3 samples	EQ. 200 um	NH ₂	
Peroxidase Labeling Kit-SH	LK09	3 samples	50 - 200 µg	SH	Peroxidase
Peroxidase Labeling Kit - NH ₂ (for 1 mg)	LK51	1 sample	1 mg	NH ₂	
Alkaline Phosphatase Labeling Kit-NH ₂	LK12	3 samples	50, 000 uz	NH ₂	Alkaline
Alkaline Phosphatase Labeling Kit-SH	LK13	3 samples	50 - 200 µg	SH	Phosphatase
Biotin Labeling Kit -NH ₂	LK03	3 samples	50, 200 ug	NH ₂	Biotin
Biotin Labeling Kit -SH	LK10	3 samples	50 - 200 µg	SH	
Biotin Labeling Kit - NH ₂ (for 1 mg)	LK55	1 sample	1 mg	NH ₂	
Biotinylation Kit (Sulfo-OSu)	BK01	1 set	1 - 5 mg	NH ₂	
R-Phycoerythrin Labeling Kit-NH ₂	LK23	3 samples	50, 200 ug	NH ₂	P. Dhycocon thrip
R-Phycoerythrin Labeling Kit-SH	LK26	3 samples	50 - 200 µg	SH	R-Fliycoerythinn
Allophycocyanin Labeling Kit-NH ₂	LK21	3 samples	50 200 ug	NH ₂	
Allophycocyanin Labeling Kit-SH	LK24	3 samples	50 - 200 μg	SH	Anophycocyanin



Cross-linking reagents

Cross-linking reagents are used for the conjugation of two or more macromolecules. Cross-linking reagents are classified into two major groups, hetero-bifunctional and homo-bifunctional. Hetero-bifunctional cross-linking reagents have two types of reactive groups in their molecules, succinimide and maleimide. These two types of reactive groups make it possible, through modification by hetero-bifunctional reagents, for the biological materials to perform different functions, such as amine reactive and thiol reactive function. These modified materials may then react with other materials through the attached functional groups. In general, conjugated enzymes and monoclonal antibodies for enzyme immunoassay (EIA) are prepared using these heterobifunctional cross-linking reagents. Of the reagents that have succinimide and maleimide as their functional groups, aliphatic compounds such as GMBS and EMCS are superior to aromatic compounds in the stability of maleimide in basic conditions.

Water Soluble Type

Product Name	Product Code	Cas No.	Length(Å)	Type (Target)	
Sulfo-EMCS	S024	103848-61-9 (free acid)	9.4		
Sulfo-GMBS	S025	185332-92-7	6.9		
Sulfo-HMCS	S026	211236-35-0	13.0	Hetero-bifunctional (NH ₂ -SH)	
Sulfo-KMUS	S250	211236-68-9	16.7		
Sulfo-SMCC	S330	92921-24-9	8.0		
BS3	B574	82436-77-9 (free acid)	8.9	Homo-bifunctional	
DTSSP	D630	81069-02-5 (free acid)	8.5	(NH ₂)	
Sulfo-AC5-SPDP	S359	169751-10-4	12.6	Other	

Water Insoluble Type

Product Name	Product Code	Cas No.	Length(Å)	Type (Target)
EMCS	E018	55750-63-5	9.4	
GMBS	G005	80307-12-6	6.9	Hetero-bifunctional (NH ₂ -SH)
SPDP	S291	68181-17-9	4.1	
DSP	D629	57757-57-0	8.5	
Dithiobis (succinimidyl undecanoate)	D537	147072-47-7	-	Homo-bifunctional (NH ₂)
Dithiobis (succinimidyl hexanoate)	D539	1083285-37-3	-	

Detergents

Detergents are normally used to isolate large insoluble molecules such as proteins. In the past, polyoxyethylene ether non-ionic detergents were widely used. These detergents, however, had several problems, such as denaturation of proteins and low CMC vale, which cannot be separated easily by dialysis. Most of the current detergents are non-ionic type and easily separated by dialysis. Since Dojindo detergents are highly purified and characteristically designed, these detergents are used as one of the materials in diagnostic research.

Nonionic

Product Name	Product Code	Cas No.	CMC(mM)	Туре
MEGA-8	M014	85316-98-9	55 - 67	
MEGA-9	M015	85261-19-4	25	Glucamine
MEGA-10	M016	85261-20-7	7	
BIGCHAP	B043	86303-22-2	2.9	Oluceremide
deoxy-BIGCHAP	D045	86303-23-3	1.4	Giuconamide
n-Heptyl- β -D-thioglucoside	H015	85618-20-8	30	
n-Octyl- β -D-glucoside	O001 29836-26-8		25	Glucose
n-Octyl- β -D-thioglucoside	O003	85618-21-9	9	
n-Dodecyl- β -D-maltoside	D316	69227-93-6	0.17	
n-Decyl- β -D-maltoside	D382	82494-09-5	1.8	Maltana
n-Nonyl- β -D-thiomaltoside	N373	148565-55-3	2.4	Waltose
n-Octyl- β -D-maltoside	O393	82494-08-4	23.4	
3-Oxatridecyl- a -D-mannoside	O401	914802-92-9	0.63	Mannose
Trehalose C12	T461	64622-91-9	0.15	Trabalaac
Trehalose C14	T464	64622-92-0	0.012	Trenaiose

Ionic

Product Name	Product Code	Cas No.	CMC(mM)	Туре	
Sodium cholate (purified)	C321	361-09-1	14	Oh alia a sid	
Sodium deoxycholate (for protein crystallization)	D520	145224-92-6	5	Cholic acid	

Zwitterionic

Product Name	Product Code	Cas No.	CMC(mM)	Туре	
CHAPS	C008	75621-03-3	8	Cholomido	
CHAPSO	C020	82473-24-3	8	Cholamide	

Good's Buffers

Buffers, mixtures of appropriate weak acids, and their conjugate bases, are usually used. Most biological reactions occur at a neutral pH, from 6 to 8; the buffer needs to be effective in this range. Furthermore, the acids and bases used in the buffer should not produce chelates with metal ions, which are essential in biological systems. For these reasons, Dr. Good developed several aminoethane and aminopropane sulfonic acids that are now widely used for biological research and analysis.

Product Name	Product Code	Cas No.	Water Solubility (0°C,mol/l)	pKa(20°C)	⊿ pKa/°C	pH range
MES	GB12	145224-94-8	0.65	6.15	-0.011	5.5 – 7.0
Bis-Tris	GB05	6976-37-0	>1.0	6.46	-	5.7 – 7.3
ADA	GB02	26239-55-4	insoluble	7.15	-0.011	5.8 - 7.4
PIPES	GB15	5625-37-6	insoluble	6.80	-0.0085	6.1 – 7.5
PIPES sesquisodium	GB25	100037-69-2	>1.0	6.8	-0.0085	6.1 – 7.5
ACES	GB01	7365-82-4	0.22	6.90	-0.020	6.0 – 7.5
MOPSO	GB14	68399-77-9	0.75	6.95	-	6.2 – 7.4
BES	GB03	10191-18-1	3.2	7.15	-0.016	6.6 - 8.0
MOPS	GB13	1132-61-2	3.0	7.20	-0.006	6.5 – 7.9
TES	GB18	7365-44-8	2.6	7.50	-0.020	6.8 - 8.2
HEPES	GB10	7365-45-9	2.25	7.55	-0.014	6.8 - 8.2
TAPSO	GB20	68399-81-5	1.0	7.7	-	7.0 – 8.2
POPSO	GB16	68189-43-5	insoluble	7.85	-	7.2 – 8.5
HEPPSO	GB11	68399-78-0	2.2	7.90	-	7.4 – 8.6
EPPS	GB09	16052-06-5	2.5	8.0	-0.007	7.5 – 8.5
Tricine	GB19	5704-4-1	0.8	8.15	-0.021	7.8 – 8.8
Bicine	GB04	150-25-4	1.1	8.35	-0.018	7.7 – 9.1
TAPS	GB17	29915-38-6	>1.0	8.4	-	7.7 – 9.1
CHES	GB07	103-47-9	0.85	9.50	-0.009	8.6 – 10.0
CAPS	GB06	1135-40-6	0.8	10.40	-0.009	9.7 – 11.1

Metal Chelates

Organic compounds that coordinate metal ions into circular structures (chelate circles) are called chelating reagents. Most chelating reagents include oxygen, nitrogen, or sulfur atoms in their molecules. Chelate structures with five or six member rings form the most stable chelate circle. In chelating reagents of typical chelating reagents, such as ethylenediamine, acetylacetone, and oxine, several molecules are coordinated with one metal ion.

Product Name	Product Code	Cas No.
EDTA-OH	E005	150-39-0
GEDTA(EGTA)	G002	67-42-5
4H(EDTA • free acid)	H001	60-00-4
2K(EDTA · 2K)	K001	25102-12-9
3K(EDTA • 3K)	K002	65501-24-8
2NA(EDTA • 2Na)	N001	6381-92-6
3NA(EDTA • 3Na)	N002	85715-60-2
4NA(EDTA • 4Na)	N003	13235-36-4
2NH4(EDTA · 2NH ₄)	N008	20824-56-0
ВАРТА	B019	85233-19-8 (free acid)
CyDTA	C018	125572-95-4
DTPA	D022	67-43-6
HIDA	H006	93-62-9
NTPO	N030	7611-50-9

Custom Synthesis Services

At Dojindo, we specialize in organic synthesis and structural modifications of small molecules, catering to a wide range of industries and research fields. Our team of experienced chemists is well-versed in designing and synthesizing complex molecules to meet your research and development needs.

Our Expertise

We excel in the synthesis and optimization of various compounds, including but not limited to:



Chromogenic dyes

Luminescent substrates

Electron mediators

🚏 Enzyme substrates

Conjugation labeling

How to Request

To initiate a custom synthesis project, please contact one of our local offices. We work closely with clients to ensure that all specific requirements are met.

To clarify your request, we would appreciate the following information at the time of request

- Relevant research papers or publications.
- Molecular structures
- Performance specifications or any other requirements for the final product.

Based on this information, we will conduct a thorough evaluation and provide you with a quote tailored to your project needs.

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