

Н. Б. ГАЛУЩАК

ОБЕСПЕЧЕНИЕ ЛАБОРАТОРИЙ СТАНДАРТНЫМИ ВЕЩЕСТВАМИ И СПЕЦИАЛИЗИРОВАННЫМИ РЕАКТИВАМИ.

Сообщение 1.

МОНОКОМПОНЕНТНЫЕ СТАНДАРТНЫЕ ВЕЩЕСТВА ПРОИЗВОДСТВА «Carl Roth GmbH & Co»

Для проведения химических анализов с помощью существующих приборных методов, в том числе хроматографических, необходимы образцы сравнения или стандартные образцы веществ (стандарты).

Следует отметить, что выпуск сертифицированных стандартов в государствах бывшего СССР практически прекратился. На Украине в настоящее время в небольшом ассортименте выпускаются стандарты растворителей, стандарты для атомно-адсорбционной спектроскопии и стандарты для контроля качества лекарственных средств. В настоящее время проводятся работы по расширению выпуска стандартов для контроля качества лекарственных средств в соответствии с Украинской Фармакопеей и Временными фармакопейными статьями.

В сообщениях и статьях настоящей серии будут рассмотрены международные стандарты (International Standards), выпускаемые ВОЗ, стандарты, выпускаемые Секретариатами международных и национальных фармакопей и стандарты производства инофирм.

Ниже изложены общая информация о компании «Carl Roth GmbH & Co», Германия, и перечень сертифицированных монокомпонентных стандартных веществ, выпускаемых этой компанией. Перечень смесевых (многокомпонентных) стандартных веществ производства «Carl Roth GmbH & Co» будет приведен в последующих публикациях.

Информация о компании "Carl Roth GmbH & Co", Германия

Фирма, основанная в 1879 году, имеет богатые традиции. Первоначально компания получила известность благодаря исследованиям и производству высококачественных соединений, выделенных из природного сырья. В настоящее время компания является поставщиком всех видов химических реактивов, лабораторного оборудования, приборов и аппаратуры.

Главным приоритетом компании является качество. В августе 1995 года компания была сертифицирована в соответствии с ISO 9001.

С каталогом «Carl Roth GmbH & Co» можно познакомиться в Интернете по адресу: <http://www.Carl-Roth.de> или заказать в ЗАО "Метхим", или непосредственно в «Carl Roth GmbH».

Каталог компании имеет 14 разделов, которые можно объединить в три группы.

Обеспечение лабораторий: оборудование общего назначения; различные типы лабораторной посуды и аксессуаров; приспособления и оборудование для безопасного хранения и транспортировки опасных веществ; приспособления и материалы для разделения и фильтрации; различные типы лабораторного оборудования; измерительные инструменты; оптические инструменты и лампы; моющие средства, в том числе для молекулярной биологии; инструменты; рабочая одежда и защитные приспособления; техническая и научная литература.

Химикаты: химические реактивы; вещества природного происхождения и их синтетические аналоги; растворители для жидкостной хроматографии, растворители для аналитических и препаративных целей; реактивы для молекулярной биологии; готовые к применению реагенты для электрофореза, сцинтилляционных определений и гистохимии; другие вещества.

Реактивы и материалы для проведения научных исследований в области медицины, биологии и других наук, изучающих живую материю, а также для создания новейших технологий, в частности, для исследований и синтеза ДНК.

В целом о каталоге можно сказать: "Всё, и любая мелочь тоже, для химической лаборатории".

Приведенный ниже перечень стандартных веществ для различных видов хроматографии (газовой, высокоэффективной жидкостной, тонкослойной) является достаточно полным. В нем представлены стандарты растворителей, стандарты веществ промышленного производства и продуктов их трансформации. Мы полагаем, что особый интерес представляет уникальная коллекция стандартов веществ природного происхождения.

ПЕРЕЧЕНЬ МОНОКОМПОНЕНТНЫХ СТАНДАРТНЫХ ВЕЩЕСТВ ПРОИЗВОДСТВА «Carl Roth GmbH & Co»

Abietic acid $C_{20}H_{30}O_2$	Acetyl acid ethyl ester $C_4H_8O_2$	Acetyl acid hexyl ester $C_8H_{16}O_2$
Acacetin $C_{16}H_{12}O_5$	Acetyl acid cis-trans-far-	Acetyl acid isobutyl ester
Acetyl acid amyl ester $C_7H_{14}O_2$	nezy ester $C_{17}H_{28}O_2$	$C_6H_{12}O_2$
Acetyl acid benzyl ester	Acetyl acid fenchyl ester	Acetyl acid isoeugenoyl
$C_9H_{10}O_2$	$C_{12}H_{20}O_2$	ester $C_{12}H_{14}O_3$
Acetyl acid cinnamyl ester	Acetyl acid geranyl ester	Acetyl acid lavandulyl
$C_{11}H_{12}O_2$	$C_{12}H_{20}O_2$	ester $C_{12}H_{20}O_2$
Acetyl acid decyl ester	Acetyl acid heptyl ester	Acetyl acid L-bornyl ester
$C_{12}H_{24}O_2$	$C_9H_{18}O_2$	$C_{12}H_{20}O_2$

Acetyc acid linalyl ester $C_{12}H_{20}O_2$
 Acetyc acid L-menthyl ester $C_{12}H_{22}O_2$
 Acetyc acid methyl ester $C_3H_6O_2$
 Acetyc acid 2-octyl ester $C_{10}H_{20}O_2$
 Acetyc acid octyl ester $C_{10}H_{20}O_2$
 Acetyc acid 2-phenylethyl ester $C_{10}H_{12}O_2$
 2-Acetyl-3-ethylpyrazine $C_8H_{10}N_2O$
 Acetyleugenolol $C_{12}H_{14}O_3$
 2-Acetyl-3-methylpyra-zine $C_7H_8N_2O$
 2-Acetylpyrazine $C_6H_6N_2O$
 2-Acetylpyrrole C_6H_7NO
 2-Acetylthiazol C_5H_5NOS
 Actidione $C_{15}H_{23}NO_4$
 Adonitol $C_5H_{12}O_5$
 Ajmalicine $C_{21}H_{24}N_2O_3$
 Ajmalin $C_{20}H_{26}N_2O_2$
 L-Alanine $C_3H_7NO_2$
 Allylphenoxyacetate $C_{11}H_{12}O_3$
 Aloe-emodin $C_{15}H_{10}O_5$
 Aloin $C_{21}H_{22}O_9$
 Aloin A $C_{21}H_{22}O_9$
 Amentoflavone $C_{30}H_{18}O_{10} \cdot 3H_2O$
 2-Amino-6-chloropyrazine $C_4H_4ClN_3$
 Amygdalin $C_{20}H_{27}NO_{11} \cdot 3H_2O$
 n-Amyl alcohol $C_5H_{12}O$
 tert-Amyl alcohol $C_5H_{12}O$
 α -Amyrin $C_{30}H_{50}O$
 β -Amyrin $C_{30}H_{50}O$
 Anethole $C_{10}H_{12}O$
 cis-Anethol $C_{10}H_{12}O$
 Angelicin $C_{11}H_6O_3$
 2-Anisaldehyde $C_8H_8O_2$
 4-Anisaldehyde $C_8H_8O_2$
 4-Anisylacetone $C_{11}H_{14}O_2$

Anthranilic acid methyl ester $C_8H_9NO_2$
 Apigenin $C_{15}H_{10}O_5$
 Apigenin-7-glucozide $C_{21}H_{20}O_{10}$
 Apigeninidin $C_{15}H_{10}O_4Cl$
 Apocynin $C_9H_{10}O_3$
 L(+)-Arabinose $C_5H_{10}O_5$
 Arachidonic acid $C_{20}H_{32}O_2$
 p-Arbutin $C_{12}H_{16}O_7$
 Aristolochic acid (I and II) $C_{17}H_{11}NO_7 + C_{16}H_9NO_6$
 Aristolochic acid sodium salt $C_{17}H_{10}NO_7$
 α -Asarone $C_{12}H_{16}O_3$
 β -Asarone $C_{12}H_{16}O_3$
 Asiaticoside $C_{48}H_{78}O_{19}$
 Aucubin $C_{15}H_{22}O_9$
 Azadirachtin $C_{35}H_{44}O_{16}$
 Azulene $C_{10}H_8$
 Bacitracin
 Behenic acid $C_{22}H_{44}O_2$
 Behenic acid methyl ester
 Benzaldehyde C_7H_6O
 Benzene C_6H_6
 Benzoic acid ethyl ester $C_9H_{10}O_2$
 Benzoic acid isobutyl ester $C_{11}H_{14}O_2$
 Benzoic acid methyl ester $C_8H_8O_2$
 Benzophenone $C_{13}H_{10}O$
 Benzothiazole C_6H_4NS
 Benzyl alcohol C_7H_8O
 6-Benzylaminopurine $C_{12}H_{11}N_5$
 Berberine chloride hydrate $C_{20}H_{18}ClNO_4 \cdot aq$
 Bergamottin $C_{21}H_{22}O_4$
 Bergapten $C_{12}H_8O_4$
 Betulin $C_{30}H_{50}O_2$
 Betulinic acid $C_{30}H_{48}O_3$
 D(+)-Biotin $C_{10}H_{16}N_2O_3S$
 (-)- α -Bisabolol $C_{15}H_{26}O$
 Bixin-(ol) $C_{25}H_{30}O_4$
 (-)-Borneol $C_{10}H_{18}O$

(+)-Borneol $C_{10}H_{18}O$
 Bromelain
 5-Bromo-2'-desoxyuride
 Butanal C_4H_8O
 1,4-Butanediol $C_4H_{10}O_2$
 2,3-Butanediol $C_4H_{10}O_2$
 1-Butanol $C_4H_{10}O$
 tert-Butanol $C_4H_{10}O$
 2-Butanone C_4H_8O
 Butein $C_{15}H_{12}O_5$
 cis-2-Butene-1,4-diol $C_4H_8O_2$
 Butyl salicylate $C_{11}H_{14}O_3$
 n-Butyl-n-hexanoate $C_{10}H_{20}O_2$
 2-Butyl-3-methylpyrazine $C_9H_{14}N_2$
 Butyric acid amyl ester $C_9H_{18}O_2$
 Butyric acid butyl ester $C_8H_{16}O_2$
 Butyric acid ethyl ester $C_6H_{12}O_2$
 Butyric acid hexyl ester $C_{10}H_{20}O_2$
 Butyric acid isoamyl ester $C_9H_{18}O_2$
 Butyric acid isobutyl ester $C_8H_{16}O_2$
 Butyric acid methyl ester $C_5H_{10}O_2$
 Butyric acid octyl ester $C_{12}H_{24}O_2$
 Butyric acid propyl ester $C_7H_{14}O_2$
 γ -Butyrolactone $C_4H_6O_2$
 Caffeic acid $C_9H_8O_4$
 Camphene $C_{10}H_{16}$
 (+)-Camphor $C_{10}H_{16}O$
 DL-levo-Camphor $C_{10}H_{16}O$
 Cantharidin $C_{10}H_{12}O_4$
 Canthaxanthin $C_{40}H_{52}O_2$
 Capric acid $C_{10}H_{20}O_2$
 Capric acid ethyl ester $C_{12}H_{24}O_2$

Capric acid isoamyl ester

$C_{13}H_{26}O_2$

Capric acid methyl ester

$C_{11}H_{22}O_2$

Capric aldehyde $C_{10}H_{20}O$

Caproic acid $C_6H_{12}O_2$

Caproic acid ethyl ester

$C_8H_{16}O_2$

Caproic acid methyl ester

$C_7H_{14}O_2$

Caproic aldehyde $C_6H_{12}O$

Caprylic acid $C_8H_{16}O_2$

Caprylic acid ethyl ester

$C_{10}H_{20}O_2$

Caprylic acid isopropyl

ester $C_{11}H_{22}O_2$

Caprylic acid methyl ester

$C_9H_{18}O_2$

Caprylic aldehyde $C_8H_{16}O$

Capsaicin $C_{18}H_{27}NO_3$

Capsantin $C_{40}H_{56}O_3$

(+)-2-Carene $C_{10}H_{16}$

δ -3-Carene $C_{10}H_{16}$

β -Carotene $C_{40}H_{56}$

Carvacrol $C_{10}H_{14}O$

(-)-Carvone $C_{10}H_{14}O$

(+)-Carvone $C_{10}H_{14}O$

β -Caryophyllene $C_{15}H_{24}$

Catalpol $C_{15}H_{22}O_{10}$

(+)-Catechin $C_{15}H_{14}O_6$

DL-Catechin $C_{15}H_{14}O_6$

Caulophyllogenin $C_{30}H_{48}O_5$

(-)-a-Cedren $C_{15}H_{24}$

Cedrol $C_{15}H_{26}O$

Cerotic acid $C_{26}H_{52}O_2$

Cetyl alcohol $C_{16}H_{34}O$

Chellidonine $C_{20}H_{19}NO_5$

a-Chloralose $C_8H_{11}Cl_3O_6$

Chlorogenic acid $C_{16}H_{18}O_9$

2-Chloro-3-methylpyrazine

Chlorophyll A

$C_{56}H_{72}MgN_4O_5$

2-Chloropyrazine $C_4H_3ClN_2$

Chrysantemyl alcohol

$C_{10}H_{18}O$

Chrysin $C_{15}H_{10}O_4$

Chrysoeriol $C_{16}H_{12}O_6$

Chrysophanic acid $C_{15}H_{10}O_4$

Chryzanthellin A $C_{58}H_{94}O_{25}$

Chryzanthellin B $C_{58}H_{94}O_{26}$

1,4-Cineole $C_{10}H_{18}O$

Cinnamic acid benzyl ester

$C_{16}H_{14}O_2$

Cinnamic acid ethyl ester

$C_{11}H_{12}O_2$

Cinnamic aldehyde C_9H_8O

Citral $C_{10}H_{16}O$

Citric acid triethyl ester

$C_{12}H_{20}O_7$

Citronellal $C_{10}H_{18}O$

d-Citronellol $C_{10}H_{20}O$

DL- β -Citronellol $C_{10}H_{20}O$

L-Citronellol $C_{10}H_{20}O$

DL-Citronellyl acetate

$C_{12}H_{22}O_2$

Cnicin $C_{20}H_{26}O_7$

Colchine $C_{22}H_{25}NO_6$

Corynanthine $C_{21}H_{26}N_2O_3$

o-Coumaric acid $C_9H_8O_3$

p-Coumaric acid $C_9H_8O_3$

Coumarin $C_9H_6O_2$

Cryptoxanthin $C_{40}H_{56}O$

Cucurbitacin E $C_{32}H_{44}O_8$

Cucurbitacin I $C_{30}H_{42}O_7$

Cumic alcohol $C_{10}H_{14}O$

Cuminaldehyde $C_{10}H_{12}O$

Cyanidin chloride

$C_{15}H_{11}O_6Cl$

Cyanine chloride

$C_{27}H_{31}O_{16}Cl$

Cyclohexane C_6H_{12}

Cyclohexanone $C_6H_{10}O$

p-Cymene $C_{10}H_{14}O$

L-Cysteine $C_3H_7NO_2S$

Cytisine $C_{11}H_{14}N_2O$

Daidzein $C_{15}H_{10}O_4$

Daphnetin $C_9H_6O_4$

Datisctin $C_{15}H_{10}O_6$

Deacetyl-lanatoside

$C_{47}H_{74}O_{19}$

γ -Decalactone $C_{10}H_{18}O_2$

δ -Decalactone $C_{10}H_{18}O_2$

cis+trans-2-Decalol

$C_{10}H_{16}O$

n-Decane $C_{10}H_{22}$

Delphinidin chloride

$C_{15}H_{11}O_7Cl$

2,6-Dichloropyrazine

$C_4H_2ClN_2$

Didymine $C_{28}H_{34}O_{14}$

2-Diethylamino ethanol

$C_6H_{15}NO$

Diethylene glycol dimethyl

ether $C_6H_{14}O_3$

2,3-Diethylpyrazine $C_8H_{12}N_2$

Digitonin $C_{56}H_{92}O_{29}$

Digoxin $C_{41}H_{64}O_{14}$

Dihydrocarveol $C_{10}H_{18}O$

Dihydrocarvone $C_{10}H_{16}O$

Dihydrocoumarin $C_9H_8O_2$

Dihydroergotamine methane

sulfonate

Dihydrojasmonone $C_{11}H_{18}O$

Dihydroouabain $C_{29}H_{46}O_{12}$

Diisopropylketone $C_7H_{14}O$

2,4-Dimethyl-5-acetylthi-

azole C_7H_9NOS

2,6-Dimethylanilin $C_8H_{11}N$

2,6-Dimethylheptene-5-ol-2

$C_9H_{18}O$

3,7-Dimethyl-1-octanol

$C_{10}H_{22}O$

2,5-Dimethyl-1-octene-6-

one $C_{10}H_{18}O$

2,4-Dimethylpentane C_7H_{16}

2,4-Dimethylphenol $C_8H_{10}O$

2,6-Dimethylphenol $C_8H_{10}O$

2,5-Dimethylpyrazine

$C_6H_8N_2$

2,6-Dimethylpyrazine

$C_6H_8N_2$

4,5-Dimethylthiazol C_5H_7NS

Diosgenin

Diosmetin $C_{16}H_{12}O_6$

Diosmin $C_{28}H_{32}O_{15}$

Dipalmitin $C_{35}H_{68}O_5$

Diphenyl $C_{12}H_{10}$

γ -Dodecalactone $C_{12}H_{22}O_2$

δ -Dodecalactone $C_{12}H_{22}O_2$
 n-Dodecane $C_{12}H_{26}$
 β -Ecdysterone $C_{27}H_{44}O_7$
 Echinocystic acid $C_{30}H_{48}O_4$
 Echinocystic acid-3-glucoside $C_{36}H_{58}O_9$
 Emetine dihydrochloride $C_{29}H_{40}N_2O_4$
 Emodin $C_{15}H_{10}O_5$
 (-)-Epicatechin $C_{15}H_{14}O_6$
 Ergonovine maleate $C_{19}H_{23}N_3O_2$
 Eriodictyol $C_{15}H_{12}O_6$
 Eriodictyol-7-glucoside $C_{21}H_{22}O_{11}$
 Erythriol $C_{30}H_{50}O_2$
 Esculetin $C_9H_6O_4$
 Esculin $C_{15}H_{16}O_9 \cdot 1.5H_2O$
 β -Escyn $C_{55}H_{86}O_{24}$
 2-Ethoxy-3-ethylpyrazine $C_8H_{12}N_2O$
 2-Ethoxy-3-isopropylpyrazine $C_9H_{14}N_2O$
 2-Ethoxy-3-methylpyrazine $C_7H_{10}N_2O$
 2-Ethoxythiazole C_5H_7NS
 Ethylbenzene C_8H_{10}
 2-Ethyl-1-butanol $C_6H_{14}O$
 2-Ethylfuran C_6H_8O
 2-Ethylhexanal $C_8H_{16}O$
 2-Ethylhexanol $C_8H_{18}O$
 Ethyl-3-hydroxyoctanoate $C_{10}H_{20}O_3$
 2-Ethyl-4-methyl thiazol C_6H_9NS
 2-Ethylpyrazine $C_6H_8N_2$
 Ethylvanillin $C_9H_{10}O_3$
 Eucaliptol $C_{10}H_{18}O$
 Eugenol $C_{10}H_{12}O_2$
 Eugenol methyl ether $C_{11}H_{14}O_2$
 Farnesol $C_{15}H_{26}O$
 (-)-Fenchone $C_{10}H_{16}O$
 (+)-Fenchone $C_{10}H_{16}O$
 Fenchyl alcohol $C_{10}H_{18}O$
 Fernen $C_{30}H_{50}O$

Ferulic acid $C_{10}H_{10}O_4$
 Fisetin $C_{15}H_{10}O_6$
 Flavanomarein $C_{21}H_{22}O_{11}$
 Formic acid benzyl ester $C_8H_8O_2$
 Frangulin (A+B) $C_{21}H_{20}O_9/C_{20}H_{18}O_9$
 Frangulin B $C_{20}H_{18}O_9$
 Friedelin $C_{30}H_{50}O$
 Furfural $C_5H_4O_2$
 Furfuryl alcohol $C_5H_6O_2$
 2-Furylmethylketone $C_6H_6O_2$
 Galangin $C_{15}H_{10}O_5$
 Gallic acid monohydrate $C_7H_6O_5$
 Genistein $C_{21}H_{20}O_{10}$
 β -Gentiobiose octaacetate $C_{28}H_{38}O_{19}$
 Geraldol $C_{16}H_{12}O_6$
 Geraniol $C_{10}H_{18}O$
 Gillaberellic acid $C_{19}H_{22}O_6$
 Ginsenoside - Rb1 $C_{54}H_{92}O_{23}$
 Ginsenoside-Rb2 $C_{53}H_{90}O_{22}$
 Ginsenoside-Rc $C_{53}H_{90}O_{22}$
 Ginsenoside-Rd $C_{48}H_{82}O_{18}$
 Ginsenoside-Re $C_{48}H_{82}O_{18}$
 Ginsenoside-Rf $C_{42}H_{72}O_{14}$
 Ginsenoside - Rgl $C_{42}H_{72}O_{14}$
 1-O- α -D-Glucopyranosyl-D-fructose $C_{12}H_{22}O_{11}$
 L(-)-Glucose $C_6H_{12}O_6$
 Glyceryl-1-monopalmitate $C_{19}H_{38}O_4$
 18- β -Glycyrrhetic acid $C_{30}H_{46}O_4$
 Glycyrrhizinic acid ammonium salt $C_{42}H_{65}NO_{16} \cdot aq$
 Griseofulvin $C_{17}H_{17}ClO_6$
 Guaiazulene $C_{15}H_{18}O$
 Guajacol $C_7H_8O_2$
 Hammamelitannin $C_{20}H_{20}O_{14}$
 Harmann $C_{12}H_{10}N_2$
 Harpagoside $C_{24}H_{30}O_{11}$
 Hederacoside $C_{59}H_{96}O_{26}$
 Hederagenin $C_{30}H_{48}O_4$

α -Hederin $C_{41}H_{66}O_{12}$
 Hemin (hydrochloride) $C_{34}H_{32}ClFeN_4O_4$
 1-Heptadecanoic acid $C_{17}H_{34}O_2$
 Heptadecanoic acid methyl ester $C_{18}H_{36}O_2$
 γ -Heptalactone $C_7H_{12}O_2$
 δ -Heptalactone $C_7H_{12}O_2$
 1-Heptanol $C_7H_{16}O$
 2-Heptanol $C_7H_{16}O$
 3-Heptanone $C_7H_{16}O$
 Herniarin $C_{10}H_8O_3$
 Hesperetin $C_{16}H_{14}O_6$
 Hesperidin $C_{28}H_{34}O_{15}$
 δ -Hexadecalactone $C_{16}H_{30}O_2$
 n-Hexadecane $C_{16}H_{34}$
 Hexahydropseudojonone $C_{13}H_{26}O$
 γ -Hexalactone $C_6H_{10}O_2$
 1-Hexanol $C_6H_{14}O$
 2-Hexanol $C_6H_{14}O$
 3-Hexanone $C_6H_{12}O$
 trans-Hexene-2-al $C_6H_{10}O$
 cis-Hexene-3-ol-1 $C_6H_{12}O$
 Hexene-1-ol-3 $C_6H_{12}O$
 trans-Hexene-2-ol-1 $C_6H_{12}O$
 trans-Hexene-3-ol-1 $C_6H_{12}O$
 cis-Hexene-3-ylacetate $C_8H_{14}O_2$
 cis-3-Hexenyl-iso-valerate $C_{11}H_{20}O_2$
 cis-3-Hexenyl-2-methyl butyrate $C_{11}H_{20}O_2$
 Hexylcinnamaldehyde $C_{15}H_{20}O$
 L-Histidine $C_6H_9N_3O_2$
 Homobutein $C_{16}H_{14}O_5$
 Homoeriodictyol $C_{16}H_{14}O_6$
 Homoorientin $C_{21}H_{20}O_{11}$
 α -Humulen $C_{15}H_{24}$
 4-Hydrobenzoic acid ethyl ester $C_9H_{10}O_3$
 4-Hydrobenzoic acid methyl ester $C_8H_8O_3$
 Hydrobenzoic acid propyl ester $C_{10}H_{12}O_3$

Hydrocinnamic aldehyde
 $C_9H_{10}O$
 3-Hydroxybutyric acid ethyl
 ester $C_8H_{12}O_3$
 5-Hydroxymethylfurfural
 $C_6H_6O_3$
 Hydroxyvaleric acid
 $C_{15}H_{22}O_3$
 L-Hyoscyamine $C_{17}H_{23}NO_3$
 Hypericin $C_{30}H_{16}O_8$
 Hyperoside $C_{21}H_{20}O_{12}$
 Idaein chloride $C_{21}H_{21}ClO_{11}$
 Isoamyl alcohol $C_5H_{12}O$
 Isoborneol $C_{10}H_{18}O$
 Isobornyl acetate $C_{12}H_{20}O_2$
 Isobornyl isovalerate
 $C_{12}H_{26}O_2$
 Isobutyl-3-methylpyrazine
 $C_9H_{14}N_2$
 Isobutyric acid -2-pheno-
 xyethyl ester $C_{12}H_{16}O_3$
 Isobutyric acid anisyl ester
 $C_{12}H_{16}O_3$
 Isobutyric acid benzyl ester
 $C_{11}H_{14}O_2$
 Isobutyric acid ethyl ester
 $C_6H_{12}O_2$
 Isoeugenol $C_{10}H_{12}O_2$
 d-Isomenthol $C_{10}H_{20}O$
 DL-Isomenthol $C_{10}H_{20}O$
 Isomenthone $C_{10}H_{18}O$
 Isopimpinellin $C_{13}H_{10}O_5$
 (-)-Isopinocampheol $C_{10}H_{18}O$
 2-Isopropyl-4-methyl
 thiazole $C_7H_{11}NS$
 Isopulegol $C_{10}H_{18}O$
 Isoquercitrin $C_{21}H_{20}O_3$
 Isorhamnetin $C_{16}H_{12}O_7$
 Isorhoifolin $C_{27}H_{30}O_{14}$
 Isosacuranetin $C_{16}H_{14}O_3$
 Isoscopoletin $C_{10}H_8O_4$
 Isovaleraldehyde $C_5H_{10}O$
 Isovaleric acid ethyl ester
 $C_7H_{14}O_2$
 Isovaleric acid n-butyl ester
 $C_9H_{18}O_2$

Isovaleric acid phenethyl
 ester $C_{13}H_{18}O_2$
 cis-Jasmone $C_{11}H_{16}O$
 β -Jonone $C_{13}H_{20}O$
 Kaempferide $C_{16}H_{12}O_6$
 Kaempferol $C_{15}H_{10}O_6$
 Kaempferol-3-rhamnosido-
 glucosid $C_{26}H_{30}O_{15}$
 D,L-Kawain $C_{14}H_{14}O_3$
 Keracianin chloride
 $C_{27}H_{31}ClO_{15}$
 2-Ketobutyric acid $C_4H_6O_3$
 Khellin $C_{14}H_{12}O_5$
 Kuromanin chloride
 $C_{21}H_{21}ClO_{11}$
 Lanatoside $C_{49}H_{76}O_{20}$
 Lauraldehyde $C_{12}H_{24}O$
 Lauric acid ethyl ester
 $C_{14}H_{28}O_2$
 Lauric acid methyl ester
 $C_{13}H_{26}O_2$
 Lavandulol $C_{10}H_{18}O$
 (+)-Limonene $C_{10}H_{16}$
 L-Limonene $C_{10}H_{16}$
 cis+trans-1,2-(-)-Limonene
 oxid $C_{10}H_{16}O$
 cis+trans-1,2-(+)-Limonene
 oxid $C_{10}H_{16}O$
 cis-trans-Linalol oxid
 $C_{10}H_{18}O_2$
 Linalool $C_{10}H_{18}O$
 Linoleic acid $C_{18}H_{32}O_2$
 Linoleic acid ethyl ester
 $C_{20}H_{36}O_2$
 Linoleic acid methyl ester
 $C_{19}H_{34}O_2$
 Linolenic acid $C_{18}H_{30}O_2$
 Linolenic acid ethyl ester
 $C_{20}H_{34}O_2$
 Linolenic acid methyl ester
 $C_{19}H_{32}O_2$
 Loganin $C_{16}H_{24}O_{10}$
 Loganin $C_{17}H_{26}O_{10}$
 (+)-Longifolen $C_{15}H_{24}$
 Lucigenin $C_{28}H_{22}N_4O_6$
 Lupenone $C_{30}H_{48}O$

Lupeol $C_{30}H_{50}O$
 Lutein $C_{40}H_{56}O_2$
 Luteolin $C_{15}H_{10}O_6$
 Luteolin-3',7-diglucoside
 $C_{27}H_{30}O_{16}$
 Luteolin-7-glucoside
 $C_{21}H_{20}O_{11}$
 L-Valine $C_5H_{11}NO_2$
 Lycopene $C_{40}H_{56}$
 Madecassoside $C_{48}H_{78}O_{20}$
 Marein $C_{21}H_{22}O_{11}$
 Maritimein $C_{21}H_{20}O_{11}$
 m-Coumaric acid $C_9H_8O_3$
 p-Menth-1-en-4-ol
 $C_{10}H_{18}O$
 L-Menthionine
 $C_5H_{11}NO_2S$
 Menthofuran $C_{10}H_{14}O$
 (-)-Menthol $C_{10}H_{20}O$
 (+)-Menthol $C_{10}H_{20}O$
 DL-Menthol $C_{10}H_{20}O$
 (-)-Menthone $C_{10}H_{18}O$
 Menthone $C_{10}H_{18}O$
 2-Methoxy-3-sec-
 butylpyrazine
 2-Methoxy-2,3-dihydro-
 4H-pyran $C_6H_{10}O_2$
 2-Methoxy-3-
 isobutylpyrazine
 $C_9H_{14}N_2O$
 2-Methoxypyrazine
 $C_5H_5N_2O$
 L-Menthyl isovalerate
 $C_{15}H_{28}O_2$
 2-Mercaptomethyl
 pyrazine $C_5H_6N_2S$
 2-Mercaptomethyl pyridine
 C_6H_7NS
 4-Methylacethophenone
 $C_9H_{10}O$
 4-Methylbenzyl alcohol
 $C_8H_{10}O_2$
 2-Methyl-1-butanol
 $C_5H_{12}O$
 2-Methylbuten-3-ol-2
 $C_5H_{10}O$

3-Methylbuten-2-ol-1
 $C_5H_{10}O$
 3-Methylbuten-3-ol-1
 $C_5H_{10}O$
 Methylchavicol $C_{10}H_{12}O$
 -Methyl-7-ethoxycoumarin
 $C_{12}H_{12}O_3$
 5-Methyl-3-heptanone
 $C_8H_{16}O$
 Methylheptenol $C_8H_{16}O$
 Methylheptenone $C_8H_{14}O$
 4-Methyl-7-methoxy-
 coumarin $C_{11}H_{10}O_3$
 Methyl-cis-4-octenoate
 $C_9H_{16}O_2$
 Methyl-2-octynoate
 $C_9H_{14}O_2$
 3-Methylpentane C_6H_{14}
 2-Methyl-2-penten-4-one
 $C_6H_{10}O$
 2-Methylthio-3-
 ethylpyrazine
 2-Methylthio-3-
 isopropylpyrazine
 2-Methyl-1-propanol
 $C_4H_{10}O$
 Myosmin $C_9H_{10}N_2$
 Myrcene $C_{10}H_{16}$
 Myricetin $C_{15}H_{10}O_8$
 Myricitrin dihydrate
 $C_{21}H_{20}O_{12}$
 (1R)-(-)-Myrtenal $C_{10}H_{14}O$
 Naringenin $C_{15}H_{12}O_5$
 Naringenin-7-glucoside
 $C_{21}H_{22}O_{10}$
 Naringin $C_{27}H_{32}O_{14}$
 Narirutin $C_{27}H_{32}O_{14}$
 Neoeriocitrin $C_{27}H_{32}O_{15}$
 Neohesperidin $C_{28}H_{34}O_{15}$
 Nerol $C_{10}H_{18}O$
 Nerol oxide $C_{10}H_{18}O$
 Nerolialdehyde $C_{10}H_{16}O$
 cis+trans-Nerolidol
 $C_{15}H_{26}O$
 cis-Nerolidol $C_{15}H_{26}O$
 trans-Nerolidol $C_{15}H_{26}O$

Nicotine $C_{10}H_{14}N_2$
 n-Nonadecane $C_{19}H_{40}$
 γ-Nonalactone $C_9H_{16}O_2$
 δ-Nonalactone $C_9H_{16}O_2$
 n-Nonane C_9H_{20}
 2-Nonanol $C_9H_{20}O$
 Nonylacetate $C_{11}H_{22}O_2$
 Nootcatone $C_{15}H_{22}O$
 n-Octadecane $C_{18}H_{38}$
 γ-Octalactone $C_8H_{14}O_2$
 δ-Octalactone $C_8H_{14}O_2$
 n-Octane C_8H_{18}
 1-Octanol $C_8H_{18}O$
 2-Octanol $C_8H_{18}O$
 3-Octanol $C_8H_{18}O$
 2-Octanone $C_8H_{16}O$
 3-Octanone $C_8H_{16}O$
 trans-2-Octene-1-al $C_8H_{14}O$
 3-Octylacetate $C_{10}H_{20}O_2$
 Oleanoic acid $C_{30}H_{48}O_3$
 Oleanoic acid methyl ester
 $C_{31}H_{50}O_3$
 Oleanolic acid $C_{30}H_{48}O_3$
 Oleic acid $C_{18}H_{34}O_2$
 Oleic acid methyl ester
 $C_{19}H_{36}O_2$
 Orientin $C_{21}H_{20}O_{11}$
 Osajin+Pomiferin
 $C_{25}H_{24}O_5 + C_{25}H_{24}O_6$
 Oxyacanthine dichloride tetra-
 hydrate $C_{37}H_{40}N_2O_6 \cdot 2HCl \cdot 4H_2O$
 D-Panthenol $C_9H_{19}NO_4$
 Pelargononic acid n-butyl ester
 $C_{13}H_{26}O_2$
 Pelargonidin chloride
 $C_{15}H_{11}O_5Cl$
 Pelargonidin chloride 3-
 glucoside $C_{21}H_{21}ClO_{10}$
 Peltatoside $C_{26}H_{28}O_{16}$
 n-Pentadecane $C_{15}H_{32}$
 2-Pentanol $C_5H_{12}O$
 (-)-Perillaldehyde $C_{10}H_{14}O$
 Phenylacetic acid benzyl
 ester $C_{15}H_{14}O_2$
 Phenylacetic acid ethyl ester
 $C_{10}H_{12}O_2$

1-Phenylethanol $C_8H_{10}O$
 2-Phenylethanol $C_8H_{10}O$
 Phloleretin $C_{15}H_{14}O_5$
 Physalien $C_{72}H_{116}O_4$
 Physcion $C_{16}H_{12}O_5$
 Picrotoxin $C_{30}H_{34}O_{13}$
 (-)-α-Pinene $C_{10}H_{16}$
 (+)-α-Pinene $C_{10}H_{16}$
 DL-α-Pinene $C_{10}H_{16}$
 β-Pinene $C_{10}H_{16}$
 α-Pinenoxide $C_{10}H_{16}$
 Pinocamphone $C_{10}H_{16}O$
 Pinocembrin-7-methyl ester
 $C_{16}H_{14}O_4$
 Piperitone $C_{10}H_{16}O$
 (-)-Podophyllotoxin
 $C_{22}H_{22}O_8$
 Poncirin $C_{28}H_{34}O_{14}$
 Pratol $C_{16}H_{12}O_4$
 1-Propanol C_3H_8O
 Propionaldehyde C_3H_6O
 Propionic acid amyl ester
 $C_5H_{10}O_2$
 Propionic acid ethyl ester
 $C_5H_{10}O_2$
 Propionic acid hexyl ester
 $C_9H_{18}O_2$
 Propionic acid isobornyl
 ester $C_{13}H_{22}O_2$
 Propionic acid propyl ester
 $C_6H_{12}O_2$
 2-Propyl-3-methylpyrazine
 $C_8H_{12}N_2$
 Proscillaridin A $C_{30}H_{42}O_8$
 Protocatehnic acid
 $C_7H_6O_4$
 Psoralen $C_{11}H_6O_3$
 (+)-Pulegone $C_{10}H_{16}O$
 Pyrazine $C_4H_4N_2$
 Quercetin dihydrate
 $C_{15}H_{10}O_7$
 (-)-Quinic acid $C_7H_{12}O_6$
 Quinine hydrochloride
 $C_{20}H_{25}OCIN_2O_2$
 Quinine sulfate

Rauwolschine hydrochloride

$C_{21}H_{26}N_2O_3 \cdot HCl$

Rhamnetin $C_{16}H_{12}O_7$

Rhaponticin $C_{21}H_{24}O_9$

Rhein $C_{15}H_8O_6$

Rhoifolin $C_{27}H_{30}O_{14}$

Robinetin $C_{15}H_{10}O_7$

Robinetinidin

$C_{15}H_{11}O_6Cl$

Rosmarinic acid $C_{18}H_{16}O_8$

Rosoxyde (cis/trans)

$C_{10}H_{12}O$

Ruberythric acid

Rutin $C_{27}H_{30}O_{16} \cdot 3H_2O$

Sabinene $C_{10}H_{16}$

Safrol $C_{10}H_{10}O_2$

D(-)-Salicin $C_{13}H_{18}O_7$

Salicylic acid amyl ester

$C_{17}H_{16}O_3$

Salicylic acid methyl ester

$C_8H_8O_3$

Sanguinarin $C_{20}H_{14}O_4$

Santonin $C_{15}H_{18}O_3$

Scoparone $C_{11}H_{10}O_4$

Scopoletin $C_{10}H_8O_4$

sec-Butanol $C_4H_{10}O$

Senkirkine $C_{19}H_{27}NO_6$

Sennidine A $C_{30}H_{18}O_{10}$

Sennidine B $C_{30}H_{18}O_{10}$

Sennoside A $C_{42}H_{38}O_{20}$

Sennoside B $C_{42}H_{38}O_{20}$

Shikimic acid $C_7H_{10}O_5$

Silybin $C_{25}H_{22}O_{10}$

Sinapinic acid $C_{11}H_{12}O_5$

Sinigrin monohydrate

$C_{10}H_{16}NO_9S_2K \cdot 2H_2O$

Solanidine $C_{27}H_{43}NO$

α -Solanine $C_{45}H_{73}NO_{15}$

Sparteine sulfate $C_{15}H_{26}N_2$

Spiraeoside $C_{21}H_{20}O_{12}$

Squalene $C_{30}H_{50}$

Stachydrine hydrochloride

$C_7H_{13}NO_2 \cdot HCl$

Stigmasterol $C_{29}H_{48}O$

Strychnine $C_{21}H_{22}N_2O_2$

Strychnine hydrochloride

$C_{21}H_{22}N_2O_2$

Sulferetin $C_{15}H_{10}O_5$

Syringic acid $C_9H_{10}O_5$

Tamarixetin $C_{16}H_{12}O_7$

Taurocholic acid sodium salt

$C_{26}H_{44}NO_7Na \cdot aq$

α -Terpinene $C_{10}H_{16}$

γ -Terpinene $C_{10}H_{16}$

α -Terpineol $C_{10}H_{18}O$

Terpineolene $C_{10}H_{16}$

Terpinyl acetate $C_{12}H_{20}O_2$

δ -Tetradecalactone $C_{14}H_{26}O_2$

n-Tetradecane $C_{14}H_{30}$

Tetrahydrolinalool $C_{10}H_{22}O$

Tetrahydrolinalyl acetate

$C_{12}H_{24}O_2$

Tetrahydropyran $C_5H_{10}O$

2,3,5,6-Tetramethylpyrazine

$C_8H_{12}N_2$

Theobromine $C_7H_8N_4O_2$

α -Thujene $C_{10}H_{16}$

α -Thujone $C_{10}H_{16}O$

$\alpha + \beta$ -Thujone (isomers)

$C_{10}H_{16}O$

(-)-Thujopsene $C_{15}H_{24}$

Thymol $C_{10}H_{14}O$

Tilioside $C_{30}H_{26}O_{13}$

Toluene C_7H_8

Tomatidine $C_{27}H_{45}NO_3$

Tomatine $C_{50}H_{83}NO_{21}$

D(+)-Trehalose dihydrate

$C_{12}H_{22}O_{11} \cdot 2H_2O$

δ -Tridecalactone $C_{13}H_{24}O_2$

n-Tridecane $C_{13}H_{28}$

Trifolirhizin $C_{22}H_{22}O_{10}$

Trigonelline hydrochloride

$C_7H_7NO_2$

1,2,3-Trimethylbenzene

C_9H_{12}

2,4,5-Trimethylthiazole

$C_6H_9N_3$

2,3,5-Trimethylpyrazine

$C_7H_{10}N_2$

Triolein $C_{57}H_{104}O_6$

Umbelliferone $C_9H_6O_3$

γ -Undecalactone $C_{11}H_{20}O_2$

δ -Undecalactone $C_{11}H_{20}O_2$

Undecanoic acid methyl

ester $C_{12}H_{24}O_2$

1-Undecanol $C_{11}H_{24}O$

Ursolic acid $C_{30}H_{48}O_3$

Ursolic acid methyl ester

$C_{31}H_{50}O_3$

Uvaol $C_{30}H_{50}O_2$

Valencene $C_{15}H_{24}$

n-Valeraldehyde $C_5H_{10}O$

Valerenic acid $C_{15}H_{22}O_2$

Valeric acid ethyl ester

$C_7H_{14}O_2$

Valeric acid phenylethyl

ester $C_{13}H_{18}O_2$

γ -Valerolacton $C_5H_8O_2$

Vanillic acid $C_8H_8O_4$

Vanillin $C_8H_8O_3$

Vitexin $C_{21}H_{20}O_{10}$

Vitexin-2'-O-rhamnoside

$C_{27}H_{30}O_{14}$

m-Xylene C_8H_{10}

Yohimbine hydrochloride

$C_{21}H_{26}N_2O_3 \cdot HCl$

Zeaxanthin $C_{40}H_{56}O_2$

The firm " Carl Roth Gmbh & Co " propose for analytical chemistry researches a wide range standards of organic solvents, substances of a commercial production and products of their transformation. The special interest is represented by a collection of natural substances standards.

Фирма "Carl Roth Gmbh & Co" предлагает для химико-аналитических исследований широкий перечень стандартов органических растворителей и продуктов их превращений. Особый интерес представляет ассортимент стандартов веществ природного происхождения.

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ЗАТ "Метхим", 01133, Украина, г. Киев, ул. Щорса, 31;
тел/факс (044) 269-60-16, 269-61-36.
E-mail: metchim@nbi.com.ua

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