

MySQL Development Docs

MySQL database field attributes notes in this development document:

- **AI**: Auto Increment;
- **B**: Binary;
- **G**: Generated
- **NN**: Not Null;
- **PK**: Primary Key;
- **UQ**: Unique;
- **UN**: Unsigned;
- **ZF**: Zero Fill

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By: [mysql.vb](https://github.com/xieguigang/mysql.vb) reflector tool (<https://github.com/xieguigang/mysql.vb>)

compound_alternate_parents

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)		
compound_id	Int64 (11)		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	

```
CREATE TABLE `compound_alternate_parents` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `name` varchar(255) DEFAULT NULL,  
  `compound_id` int(11) DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_compound_alternate_parents_on_compound_id` (`compound_id`),  
  CONSTRAINT `fk_rails_0aefaa1014` FOREIGN KEY (`compound_id`) REFERENCES  
  `compounds` (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=50721 DEFAULT CHARSET=utf8;
```

compound_external_descriptors

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
external_id	VarChar (255)		
annotations	VarChar (255)		
compound_id	Int64 (11)		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	

```
CREATE TABLE `compound_external_descriptors` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `external_id` varchar(255) DEFAULT NULL,  
  `annotations` varchar(255) DEFAULT NULL,  
  `compound_id` int(11) DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_compound_external_descriptors_on_compound_id` (`compound_id`),  
  CONSTRAINT `fk_rails_2395524b9a` FOREIGN KEY (`compound_id`) REFERENCES  
  `compounds` (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=4011 DEFAULT CHARSET=utf8;
```

compound_substituents

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)		
compound_id	Int64 (11)		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	

```
CREATE TABLE `compound_substituents` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `name` varchar(255) DEFAULT NULL,  
  `compound_id` int(11) DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_compound_substituents_on_compound_id` (`compound_id`),  
  CONSTRAINT `fk_rails_1e68999a98` FOREIGN KEY (`compound_id`) REFERENCES  
  `compounds` (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=95356 DEFAULT CHARSET=utf8;
```

compound_synonyms

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
synonym	VarChar (255)	NN	
synonym_source	VarChar (255)	NN	
created_at	DateTime ()		
updated_at	DateTime ()		
source_id	Int64 (11)		
source_type	VarChar (255)		

```
CREATE TABLE `compound_synonyms` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `synonym` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `synonym_source` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `source_id` int(11) DEFAULT NULL,  
  `source_type` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  UNIQUE KEY `index_compound_synonyms_on_synonym` (`synonym`),  
  KEY `index_compound_synonyms_on_source_id_and_source_type`  
  (`source_id`,`source_type`)  
) ENGINE=InnoDB AUTO_INCREMENT=251049 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

compounds

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
legacy_id	Int64 (11)		
type	VarChar (255)	NN	
public_id	VarChar (9)	NN	
name	VarChar (255)	NN	
export	Boolean (1)		
state	VarChar (255)		
annotation_quality	VarChar (255)		
description	Text ()		
cas_number	VarChar (255)		
melting_point	Text ()		
protein_formula	VarChar (255)		
protein_weight	VarChar (255)		
experimental_solubility	VarChar (255)		
experimental_logp	VarChar (255)		
hydrophobicity	VarChar (255)		
isoelectric_point	VarChar (255)		
metabolism	Text ()		
kegg_compound_id	VarChar (255)		
pubchem_compound_id	VarChar (255)		
pubchem_substance_id	VarChar (255)		
chebi_id	VarChar (255)		
het_id	VarChar (255)		
uniprot_id	VarChar (255)		
uniprot_name	VarChar (255)		
genbank_id	VarChar (255)		
wikipedia_id	VarChar (255)		

synthesis_citations	Text ()
general_citations	Text ()
comments	Text ()
protein_structure_file_name	VarChar (255)
protein_structure_content_type	VarChar (255)
protein_structure_file_size	Int64 (11)
protein_structure_updated_at	DateTime ()
msds_file_name	VarChar (255)
msds_content_type	VarChar (255)
msds_file_size	Int64 (11)
msds_updated_at	DateTime ()
creator_id	Int64 (11)
updater_id	Int64 (11)
created_at	DateTime ()
updated_at	DateTime ()
phenolexplorer_id	Int64 (11)
dfc_id	VarChar (255)
hmdb_id	VarChar (255)
duke_id	VarChar (255)
drugbank_id	VarChar (255)
bigg_id	Int64 (11)
eafus_id	VarChar (255)
knapsack_id	VarChar (255)
boiling_point	VarChar (255)
boiling_point_reference	VarChar (255)
charge	VarChar (255)
charge_reference	VarChar (255)
density	VarChar (255)
density_reference	VarChar (255)
optical_rotation	VarChar (255)

optical_rotation_reference	VarChar (255)
percent_composition	VarChar (255)
percent_composition_reference	VarChar (255)
physical_description	Text ()
physical_description_reference	Text ()
refractive_index	VarChar (255)
refractive_index_reference	VarChar (255)
uv_index	VarChar (255)
uv_index_reference	VarChar (255)
experimental_pka	VarChar (255)
experimental_pka_reference	VarChar (255)
experimental_solubility_reference	VarChar (255)
experimental_logp_reference	VarChar (255)
hydrophobicity_reference	VarChar (255)
isoelectric_point_reference	VarChar (255)
melting_point_reference	VarChar (255)
molddb_alogps_logp	VarChar (255)
molddb_logp	VarChar (255)
molddb_alogps_logs	VarChar (255)
molddb_smiles	Text ()
molddb_pka	VarChar (255)
molddb_formula	VarChar (255)
molddb_average_mass	VarChar (255)
molddb_inchi	Text ()
molddb_mono_mass	VarChar (255)
molddb_inchikey	VarChar (255)
molddb_alogps_solubility	VarChar (255)
molddb_id	Int64 (11)
molddb_iupac	Text ()
structure_source	VarChar (255)

duplicate_id	VarChar (255)
old_dfc_id	VarChar (255)
dfc_name	Text ()
compound_source	VarChar (255)
flavornet_id	VarChar (255)
goodscent_id	VarChar (255)
superscent_id	VarChar (255)
phenolexplorer_metabolite_id	Int64 (11)
kingdom	VarChar (255)
superklass	VarChar (255)
klass	VarChar (255)
subclass	VarChar (255)
direct_parent	VarChar (255)
molecular_framework	VarChar (255)
chembl_id	VarChar (255)
chemspider_id	VarChar (255)
meta_cyc_id	VarChar (255)
foodcomex	Boolean (1)
phytohub_id	VarChar (255)

```
CREATE TABLE `compounds` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `legacy_id` int(11) DEFAULT NULL,
  `type` varchar(255) COLLATE utf8_unicode_ci NOT NULL,
  `public_id` varchar(9) COLLATE utf8_unicode_ci NOT NULL,
  `name` varchar(255) COLLATE utf8_unicode_ci NOT NULL,
  `export` tinyint(1) DEFAULT '0',
  `state` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `annotation_quality` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `description` mediumtext COLLATE utf8_unicode_ci,
  `cas_number` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `melting_point` mediumtext COLLATE utf8_unicode_ci,
  `protein_formula` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `protein_weight` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `experimental_solubility` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `experimental_logp` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
```

```

`hydrophobicity` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`isoelectric_point` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`metabolism` mediumtext COLLATE utf8_unicode_ci,
`kegg_compound_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`pubchem_compound_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`pubchem_substance_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`chebi_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`het_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`uniprot_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`uniprot_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`genbank_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`wikipedia_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`synthesis_citations` mediumtext COLLATE utf8_unicode_ci,
`general_citations` mediumtext COLLATE utf8_unicode_ci,
`comments` mediumtext COLLATE utf8_unicode_ci,
`protein_structure_file_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`protein_structure_content_type` varchar(255) COLLATE utf8_unicode_ci
DEFAULT NULL,
`protein_structure_file_size` int(11) DEFAULT NULL,
`protein_structure_updated_at` datetime DEFAULT NULL,
`msds_file_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`msds_content_type` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`msds_file_size` int(11) DEFAULT NULL,
`msds_updated_at` datetime DEFAULT NULL,
`creator_id` int(11) DEFAULT NULL,
`updater_id` int(11) DEFAULT NULL,
`created_at` datetime DEFAULT NULL,
`updated_at` datetime DEFAULT NULL,
`phenolexplorer_id` int(11) DEFAULT NULL,
`dfc_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`hmdb_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`duke_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`drugbank_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`bigg_id` int(11) DEFAULT NULL,
`eafus_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`knapsack_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`boiling_point` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`boiling_point_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`charge` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`charge_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`density` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`density_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`optical_rotation` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`optical_rotation_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`percent_composition` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`percent_composition_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`physical_description` mediumtext COLLATE utf8_unicode_ci,
`physical_description_reference` mediumtext COLLATE utf8_unicode_ci,
`refractive_index` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,

```

```

`refractive_index_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`uv_index` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`uv_index_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`experimental_pka` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`experimental_pka_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`experimental_solubility_reference` varchar(255) COLLATE utf8_unicode_ci
DEFAULT NULL,
`experimental_logp_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`hydrophobicity_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`isoelectric_point_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT
NULL,
`melting_point_reference` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_alogps_logp` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_logp` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_alogps_logs` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_smiles` mediumtext COLLATE utf8_unicode_ci,
`molddb_pka` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_formula` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_average_mass` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_inchi` mediumtext COLLATE utf8_unicode_ci,
`molddb_mono_mass` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_inchikey` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_alogps_solubility` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molddb_id` int(11) DEFAULT NULL,
`molddb_iupac` mediumtext COLLATE utf8_unicode_ci,
`structure_source` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`duplicate_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`old_dfc_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`dfc_name` mediumtext COLLATE utf8_unicode_ci,
`compound_source` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`flavornet_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`goodscent_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`superscent_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`phenolexplorer_metabolite_id` int(11) DEFAULT NULL,
`kingdom` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`superklass` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`klass` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`subclass` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`direct_parent` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`molecular_framework` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`chembl_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`chemspider_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`meta_cyc_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`foodcomex` tinyint(1) DEFAULT NULL,
`phytohub_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
PRIMARY KEY (`id`),
UNIQUE KEY `index_compounds_on_public_id` (`public_id`),
UNIQUE KEY `index_compounds_on_name` (`name`),

```

```
    UNIQUE KEY `index_compounds_on_name_and_public_id` (`name`,`public_id`)
) ENGINE=InnoDB AUTO_INCREMENT=31528 DEFAULT CHARSET=utf8
COLLATE=utf8_unicode_ci;
```

compounds_enzymes

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
compound_id	Int64 (11)	NN	
enzyme_id	Int64 (11)	NN	
citations	Text ()	NN	
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		

```
CREATE TABLE `compounds_enzymes` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `compound_id` int(11) NOT NULL,  
  `enzyme_id` int(11) NOT NULL,  
  `citations` mediumtext COLLATE utf8_unicode_ci NOT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  UNIQUE KEY `index_compounds_enzymes_on_compound_id_and_enzyme_id`  
  (`compound_id`,`enzyme_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=105090 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

compounds_flavors

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
compound_id	Int64 (11)	NN	
flavor_id	Int64 (11)	NN	
citations	Text ()	NN	
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
source_id	Int64 (11)		
source_type	VarChar (255)		

```
CREATE TABLE `compounds_flavors` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `compound_id` int(11) NOT NULL,  
  `flavor_id` int(11) NOT NULL,  
  `citations` mediumtext COLLATE utf8_unicode_ci NOT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `source_id` int(11) DEFAULT NULL,  
  `source_type` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  UNIQUE KEY `index_compounds_flavors_on_compound_id_and_flavor_id`  
  (`compound_id`, `flavor_id`),  
  KEY `index_compounds_flavors_on_source_id_and_source_type`  
  (`source_id`, `source_type`)  
) ENGINE=InnoDB AUTO_INCREMENT=11632 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

compounds_health_effects

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
compound_id	Int64 (11)	NN	
health_effect_id	Int64 (11)	NN	
orig_health_effect_name	VarChar (255)		
orig_compound_name	VarChar (255)		
orig_citation	Text ()		
citation	Text ()	NN	
citation_type	VarChar (255)	NN	
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
source_id	Int64 (11)		
source_type	VarChar (255)		

```
CREATE TABLE `compounds_health_effects` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `compound_id` int(11) NOT NULL,  
  `health_effect_id` int(11) NOT NULL,  
  `orig_health_effect_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `orig_compound_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `orig_citation` mediumtext COLLATE utf8_unicode_ci,  
  `citation` mediumtext COLLATE utf8_unicode_ci NOT NULL,  
  `citation_type` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `source_id` int(11) DEFAULT NULL,  
  `source_type` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_compounds_health_effects_on_source_id_and_source_type`  
  (`source_id`,`source_type`)  
) ENGINE=InnoDB AUTO_INCREMENT=11093 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```



compounds_pathways

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
compound_id	Int64 (11)		
pathway_id	Int64 (11)		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	

```
CREATE TABLE `compounds_pathways` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `compound_id` int(11) DEFAULT NULL,  
  `pathway_id` int(11) DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_compounds_pathways_on_compound_id` (`compound_id`),  
  KEY `index_compounds_pathways_on_pathway_id` (`pathway_id`),  
  CONSTRAINT `fk_rails_14c02acb79` FOREIGN KEY (`pathway_id`) REFERENCES  
`pathways` (`id`),  
  CONSTRAINT `fk_rails_34b0bf14de` FOREIGN KEY (`compound_id`) REFERENCES  
`compounds` (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=1605 DEFAULT CHARSET=utf8;
```

contents

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
source_id	Int64 (11)		
source_type	VarChar (255)		
food_id	Int64 (11)	NN	
orig_food_id	VarChar (255)		
orig_food_common_name	VarChar (255)		
orig_food_scientific_name	VarChar (255)		
orig_food_part	VarChar (255)		
orig_source_id	VarChar (255)		
orig_source_name	VarChar (255)		
orig_content	Decimal ()		
orig_min	Decimal ()		
orig_max	Decimal ()		
orig_unit	VarChar (255)		
orig_citation	Text ()		
citation	Text ()	NN	
citation_type	VarChar (255)	NN	
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()		
updated_at	DateTime ()		
orig_method	VarChar (255)		
orig_unit_expression	VarChar (255)		
standard_content	Decimal ()		

```
CREATE TABLE `contents` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `source_id` int(11) DEFAULT NULL,
```

```

`source_type` varchar(255) DEFAULT NULL,
`food_id` int(11) NOT NULL,
`orig_food_id` varchar(255) DEFAULT NULL,
`orig_food_common_name` varchar(255) DEFAULT NULL,
`orig_food_scientific_name` varchar(255) DEFAULT NULL,
`orig_food_part` varchar(255) DEFAULT NULL,
`orig_source_id` varchar(255) DEFAULT NULL,
`orig_source_name` varchar(255) DEFAULT NULL,
`orig_content` decimal(15,9) DEFAULT NULL,
`orig_min` decimal(15,9) DEFAULT NULL,
`orig_max` decimal(15,9) DEFAULT NULL,
`orig_unit` varchar(255) DEFAULT NULL,
`orig_citation` mediumtext,
`citation` mediumtext NOT NULL,
`citation_type` varchar(255) NOT NULL,
`creator_id` int(11) DEFAULT NULL,
`updater_id` int(11) DEFAULT NULL,
`created_at` datetime DEFAULT NULL,
`updated_at` datetime DEFAULT NULL,
`orig_method` varchar(255) DEFAULT NULL,
`orig_unit_expression` varchar(255) DEFAULT NULL,
`standard_content` decimal(15,9) DEFAULT NULL,
PRIMARY KEY (`id`),
KEY `content_source_and_food_index` (`source_id`,`source_type`,`food_id`)
) ENGINE=InnoDB AUTO_INCREMENT=1682258 DEFAULT CHARSET=utf8;

```

enzymes

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)	NN	
gene_name	VarChar (255)		
description	Text ()		
go_classification	Text ()		
general_function	Text ()		
specific_function	Text ()		
pathway	Text ()		
reaction	Text ()		
cellular_location	VarChar (255)		
signals	Text ()		
transmembrane_regions	Text ()		
molecular_weight	Decimal ()		
theoretical_pi	Decimal ()		
locus	VarChar (255)		
chromosome	VarChar (255)		
uniprot_name	VarChar (255)		
uniprot_id	VarChar (100)		
pdb_id	VarChar (10)		
genbank_protein_id	VarChar (20)		
genbank_gene_id	VarChar (20)		
genecard_id	VarChar (20)		
genatlas_id	VarChar (20)		
hgnc_id	VarChar (20)		
hprd_id	VarChar (255)		
organism	VarChar (255)		
general_citations	Text ()		

comments	Text ()
creator_id	Int64 (11)
updater_id	Int64 (11)
created_at	DateTime ()
updated_at	DateTime ()

```

CREATE TABLE `enzymes` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `name` varchar(255) COLLATE utf8_unicode_ci NOT NULL,
  `gene_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `description` mediumtext COLLATE utf8_unicode_ci,
  `go_classification` mediumtext COLLATE utf8_unicode_ci,
  `general_function` mediumtext COLLATE utf8_unicode_ci,
  `specific_function` mediumtext COLLATE utf8_unicode_ci,
  `pathway` mediumtext COLLATE utf8_unicode_ci,
  `reaction` mediumtext COLLATE utf8_unicode_ci,
  `cellular_location` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `signals` mediumtext COLLATE utf8_unicode_ci,
  `transmembrane_regions` mediumtext COLLATE utf8_unicode_ci,
  `molecular_weight` decimal(15,9) DEFAULT NULL,
  `theoretical_pi` decimal(15,9) DEFAULT NULL,
  `locus` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `chromosome` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `uniprot_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `uniprot_id` varchar(100) COLLATE utf8_unicode_ci DEFAULT NULL,
  `pdb_id` varchar(10) COLLATE utf8_unicode_ci DEFAULT NULL,
  `genbank_protein_id` varchar(20) COLLATE utf8_unicode_ci DEFAULT NULL,
  `genbank_gene_id` varchar(20) COLLATE utf8_unicode_ci DEFAULT NULL,
  `genecard_id` varchar(20) COLLATE utf8_unicode_ci DEFAULT NULL,
  `genatlas_id` varchar(20) COLLATE utf8_unicode_ci DEFAULT NULL,
  `hgnc_id` varchar(20) COLLATE utf8_unicode_ci DEFAULT NULL,
  `hprd_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `organism` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
  `general_citations` mediumtext COLLATE utf8_unicode_ci,
  `comments` mediumtext COLLATE utf8_unicode_ci,
  `creator_id` int(11) DEFAULT NULL,
  `updater_id` int(11) DEFAULT NULL,
  `created_at` datetime DEFAULT NULL,
  `updated_at` datetime DEFAULT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `index_enzymes_on_name` (`name`),
  UNIQUE KEY `index_enzymes_on_gene_name` (`gene_name`),
  UNIQUE KEY `index_enzymes_on_uniprot_name` (`uniprot_name`),
  UNIQUE KEY `index_enzymes_on_uniprot_id` (`uniprot_id`),
  UNIQUE KEY `index_enzymes_on_pdb_id` (`pdb_id`),
  UNIQUE KEY `index_enzymes_on_genbank_protein_id` (`genbank_protein_id`),
  UNIQUE KEY `index_enzymes_on_genbank_gene_id` (`genbank_gene_id`),

```

```
UNIQUE KEY `index_enzymes_on_genecard_id` (`genecard_id`),  
UNIQUE KEY `index_enzymes_on_genatlas_id` (`genatlas_id`),  
UNIQUE KEY `index_enzymes_on_hgnc_id` (`hgnc_id`),  
UNIQUE KEY `index_enzymes_on_hprd_id` (`hprd_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=1745 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

flavors

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)	NN	
flavor_group	VarChar (255)		
category	VarChar (255)		
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		

```
CREATE TABLE `flavors` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `name` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `flavor_group` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `category` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  UNIQUE KEY `index_flavors_on_name` (`name`)  
) ENGINE=InnoDB AUTO_INCREMENT=857 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

food_taxonomies

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
food_id	Int64 (11)		
ncbi_taxonomy_id	Int64 (11)		
classification_name	VarChar (255)		
classification_order	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	

```
CREATE TABLE `food_taxonomies` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `food_id` int(11) DEFAULT NULL,  
  `ncbi_taxonomy_id` int(11) DEFAULT NULL,  
  `classification_name` varchar(255) DEFAULT NULL,  
  `classification_order` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  PRIMARY KEY (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=920 DEFAULT CHARSET=utf8;
```

foodcomex_compound_providers

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
foodcomex_compound_id	Int64 (11)	NN	
provider_id	Int64 (11)	NN	
created_at	DateTime ()		
updated_at	DateTime ()		

```
CREATE TABLE `foodcomex_compound_providers` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `foodcomex_compound_id` int(11) NOT NULL,  
  `provider_id` int(11) NOT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_foodcomex_compound_providers_on_foodcomex_compound_id`  
  (`foodcomex_compound_id`),  
  KEY `index_foodcomex_compound_providers_on_provider_id` (`provider_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=1090 DEFAULT CHARSET=utf8;
```

foodcomex_compounds

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
compound_id	Int64 (11)	NN	
origin	VarChar (255)		
storage_form	VarChar (255)		
maximum_quantity	VarChar (255)		
storage_condition	VarChar (255)		
contact_name	VarChar (255)		
contact_address	Text ()		
contact_email	VarChar (255)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	
export	Boolean (1)		
purity	Text ()		
description	Text ()		
spectra_details	VarChar (255)		
delivery_time	VarChar (255)		
stability	VarChar (255)		
admin_user_id	Int64 (11)		
public_id	VarChar (255)	NN	
cas_number	VarChar (255)		
taxonomy_class	VarChar (255)		
taxonomy_family	VarChar (255)		
experimental_logp	VarChar (255)		
experimental_solubility	VarChar (255)		
melting_point	VarChar (255)		
food_of_origin	VarChar (255)		
production_method_reference_text	Text ()		

production_method_reference_file_name	VarChar (255)
production_method_reference_content_type	VarChar (255)
production_method_reference_file_size	Int64 (11)
production_method_reference_updated_at	DateTime ()
elemental_formula	VarChar (255)
minimum_quantity	VarChar (255)
quantity_units	VarChar (255)
available_spectra	Text ()
storage_conditions	Text ()

```

CREATE TABLE `foodcomex_compounds` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `compound_id` int(11) NOT NULL,
  `origin` varchar(255) DEFAULT NULL,
  `storage_form` varchar(255) DEFAULT NULL,
  `maximum_quantity` varchar(255) DEFAULT NULL,
  `storage_condition` varchar(255) DEFAULT NULL,
  `contact_name` varchar(255) DEFAULT NULL,
  `contact_address` text,
  `contact_email` varchar(255) DEFAULT NULL,
  `created_at` datetime NOT NULL,
  `updated_at` datetime NOT NULL,
  `export` tinyint(1) DEFAULT NULL,
  `purity` text,
  `description` text,
  `spectra_details` varchar(255) DEFAULT NULL,
  `delivery_time` varchar(255) DEFAULT NULL,
  `stability` varchar(255) DEFAULT NULL,
  `admin_user_id` int(11) DEFAULT NULL,
  `public_id` varchar(255) NOT NULL,
  `cas_number` varchar(255) DEFAULT '',
  `taxonomy_class` varchar(255) DEFAULT '',
  `taxonomy_family` varchar(255) DEFAULT '',
  `experimental_logp` varchar(255) DEFAULT '',
  `experimental_solubility` varchar(255) DEFAULT '',
  `melting_point` varchar(255) DEFAULT '',
  `food_of_origin` varchar(255) DEFAULT '',
  `production_method_reference_text` text,
  `production_method_reference_file_name` varchar(255) DEFAULT NULL,
  `production_method_reference_content_type` varchar(255) DEFAULT NULL,
  `production_method_reference_file_size` int(11) DEFAULT NULL,
  `production_method_reference_updated_at` datetime DEFAULT NULL,
  `elemental_formula` varchar(255) DEFAULT '',
  `minimum_quantity` varchar(255) DEFAULT '',

```

```
`quantity_units` varchar(255) DEFAULT '',  
`available_spectra` text,  
`storage_conditions` text,  
PRIMARY KEY (`id`),  
KEY `index_foodcomex_compounds_on_compound_id` (`compound_id`),  
KEY `index_foodcomex_compounds_on_admin_user_id` (`admin_user_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=1048 DEFAULT CHARSET=utf8;
```

foods

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)	NN	
name_scientific	VarChar (255)		
description	Text ()		
itis_id	VarChar (255)		
wikipedia_id	VarChar (255)		
picture_file_name	VarChar (255)		
picture_content_type	VarChar (255)		
picture_file_size	Int64 (11)		
picture_updated_at	DateTime ()		
legacy_id	Int64 (11)		
food_group	VarChar (255)		
food_subgroup	VarChar (255)		
food_type	VarChar (255)	NN	
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
export_to_afcdb	Boolean (1)	NN	
category	VarChar (255)		
ncbi_taxonomy_id	Int64 (11)		
export_to_foodb	Boolean (1)		

```
CREATE TABLE `foods` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `name` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `name_scientific` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `description` mediumtext COLLATE utf8_unicode_ci,  
  `itis_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `wikipedia_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
```

```

`picture_file_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`picture_content_type` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`picture_file_size` int(11) DEFAULT NULL,
`picture_updated_at` datetime DEFAULT NULL,
`legacy_id` int(11) DEFAULT NULL,
`food_group` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`food_subgroup` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`food_type` varchar(255) COLLATE utf8_unicode_ci NOT NULL,
`created_at` datetime DEFAULT NULL,
`updated_at` datetime DEFAULT NULL,
`creator_id` int(11) DEFAULT NULL,
`updater_id` int(11) DEFAULT NULL,
`export_to_afcdb` tinyint(1) NOT NULL DEFAULT '0',
`category` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,
`ncbi_taxonomy_id` int(11) DEFAULT NULL,
`export_to_foodb` tinyint(1) DEFAULT '1',
PRIMARY KEY (`id`),
UNIQUE KEY `index_foods_on_name` (`name`),
KEY `index_foods_on_name_scientific` (`name_scientific`),
KEY `index_foods_on_export_to_afcdb` (`export_to_afcdb`)
) ENGINE=InnoDB AUTO_INCREMENT=925 DEFAULT CHARSET=utf8
COLLATE=utf8_unicode_ci;

```

health_effects

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
name	VarChar (255)	NN	
description	Text ()		
chebi_name	VarChar (255)		
chebi_id	VarChar (255)		
created_at	DateTime ()		
updated_at	DateTime ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
chebi_definition	Text ()		

```
CREATE TABLE `health_effects` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `name` varchar(255) COLLATE utf8_unicode_ci NOT NULL,  
  `description` mediumtext COLLATE utf8_unicode_ci,  
  `chebi_name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `chebi_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `chebi_definition` text COLLATE utf8_unicode_ci,  
  PRIMARY KEY (`id`),  
  UNIQUE KEY `index_health_effects_on_name` (`name`),  
  KEY `index_health_effects_on_chebi_name` (`chebi_name`),  
  KEY `index_health_effects_on_chebi_id` (`chebi_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=1436 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

nutrients

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
legacy_id	Int64 (11)		
type	VarChar (255)	NN	
public_id	VarChar (9)	NN	
name	VarChar (255)	NN	
export	Boolean (1)		
state	VarChar (255)		
annotation_quality	VarChar (255)		
description	Text ()		
wikipedia_id	VarChar (255)		
comments	Text ()		
dfc_id	VarChar (255)		
duke_id	VarChar (255)		
eafus_id	VarChar (255)		
dfc_name	Text ()		
compound_source	VarChar (255)		
metabolism	Text ()		
synthesis_citations	Text ()		
general_citations	Text ()		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()		
updated_at	DateTime ()		

```
CREATE TABLE `nutrients` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `legacy_id` int(11) DEFAULT NULL,  
  `type` varchar(255) NOT NULL,
```



```

`public_id` varchar(9) NOT NULL,
`name` varchar(255) NOT NULL,
`export` tinyint(1) DEFAULT '0',
`state` varchar(255) DEFAULT NULL,
`annotation_quality` varchar(255) DEFAULT NULL,
`description` mediumtext,
`wikipedia_id` varchar(255) DEFAULT NULL,
`comments` mediumtext,
`dfc_id` varchar(255) DEFAULT NULL,
`duke_id` varchar(255) DEFAULT NULL,
`eafus_id` varchar(255) DEFAULT NULL,
`dfc_name` mediumtext,
`compound_source` varchar(255) DEFAULT NULL,
`metabolism` mediumtext,
`synthesis_citations` mediumtext,
`general_citations` mediumtext,
`creator_id` int(11) DEFAULT NULL,
`updater_id` int(11) DEFAULT NULL,
`created_at` datetime DEFAULT NULL,
`updated_at` datetime DEFAULT NULL,
PRIMARY KEY (`id`),
UNIQUE KEY `index_nutrients_on_name` (`name`),
UNIQUE KEY `index_nutrients_on_public_id` (`public_id`),
UNIQUE KEY `index_nutrients_on_name_and_public_id` (`name`,`public_id`)
) ENGINE=InnoDB AUTO_INCREMENT=39 DEFAULT CHARSET=utf8;

```

pathways

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
smpdb_id	VarChar (255)		
kegg_map_id	VarChar (255)		
name	VarChar (255)		
created_at	DateTime ()		
updated_at	DateTime ()		

```
CREATE TABLE `pathways` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `smpdb_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `kegg_map_id` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `name` varchar(255) COLLATE utf8_unicode_ci DEFAULT NULL,  
  `created_at` datetime DEFAULT NULL,  
  `updated_at` datetime DEFAULT NULL,  
  PRIMARY KEY (`id`)  
) ENGINE=InnoDB AUTO_INCREMENT=98 DEFAULT CHARSET=utf8  
COLLATE=utf8_unicode_ci;
```

references

field	type	attributes	description
id	Int64 (11)	AI, NN, PK	
ref_type	VarChar (255)		
text	Text ()		
pubmed_id	VarChar (255)		
link	VarChar (255)		
title	VarChar (255)		
creator_id	Int64 (11)		
updater_id	Int64 (11)		
created_at	DateTime ()	NN	
updated_at	DateTime ()	NN	
source_id	Int64 (11)		
source_type	VarChar (255)		

```
CREATE TABLE `references` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `ref_type` varchar(255) DEFAULT NULL,  
  `text` text,  
  `pubmed_id` varchar(255) DEFAULT NULL,  
  `link` varchar(255) DEFAULT NULL,  
  `title` varchar(255) DEFAULT NULL,  
  `creator_id` int(11) DEFAULT NULL,  
  `updater_id` int(11) DEFAULT NULL,  
  `created_at` datetime NOT NULL,  
  `updated_at` datetime NOT NULL,  
  `source_id` int(11) DEFAULT NULL,  
  `source_type` varchar(255) DEFAULT NULL,  
  PRIMARY KEY (`id`),  
  KEY `index_references_on_source_type_and_source_id`  
  (`source_type`,`source_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=31792 DEFAULT CHARSET=utf8;
```

