

ブドウ及びブドウ酒などから 分離されている酵母

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ブドウ果にはいろいろのブドウ酒酵母や野生酵母がついているほか、ブドウ酒からも混濁の原因になる酵母や産膜酵母が分離され、それらについては古くから多数の研究業績があり、枚挙にいとまがない。幸に Lodder らの著書¹⁾には、それらの酵母が殆んど全部収録されているので、これをもととし、なお次の文献を参照し、ブドウ酒の醸造に関係のある酵母として、それらの文献に記載されている酵母をアルファベット順に列挙し、できるだけ各菌株の出所を明らかにするようにした。

YEASTS ISOLATED FROM GRAPE AND GRAPE PRODUCTS

A List from the Literatures.

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The yeasts occurring naturally on grapes and present in wines are listed from the following publications, in a system suggested by Lodder and van-Rij.

They are enumerated in an alphabetical order according to their scientific or common names.

- 1) Lodder, J. & N. J. W. Kreger-van Rij; The Yeasts, A Taxonomic study, North-Holland Pub. co., Amsterdam (1952)

- 54-
- 2) Mrak E. M. & L. S. McClung; J. Bact. 40, 395(1940)
 - 3) 吉田武郎、大沢 一: 札農 14-15, 1-37()
 - 4) 小玉健吉、小玉順一郎、京野忠司: 醸工学 30, 8(1952)
 - 5) 坂口龍一郎、森 貞信、鎮目淑夫: 農化 13, 713 (1937)
 - 6) 住江金之: 農化 4, 247 (1928)
 - 7) Cruess, W. V. : The fermentation organisms of California grapes. Univ. Calif. Pub. Agr. Sic., 4, No. 1. 1-66 (1918)
 - 8) Castelli, T.: Arch. Microbiolog., 9, 449(1938); 12, 260(1942)
 - 9) Zimmermann, J.: Cent. Bakt. II, 98, 36(1938)
 - 10) Luthi, Hs.; Mitt. Lebensm. Hyg., 44, 30(1953)
 - 11) Kroemer, K. & G. Krumbholz: Arch. Microbiolog., 2, 352(1931)
 - 12) Scheffer, W. R. & E. M. Mrak: Mycopath. et Mycol. Appl., 5, 236(1951)
 - 13) Schanderl, H.: die Mikrobiologie des Weins, E. Ulmer, Stuttgart (1950)
 - 14) 横塚 勇、後藤昭二: 農化 29, 39-44; 123-135(1955)
 - 15) Peynaud, E. & S. Domercq: Congr. intern. botan., Paris, Papps. et Communs. 8, sect. 18-20, 117(1954); C. A. 48, 11719(1955)
 - 16) The Research Institute of fermentation, Yamanashi

Univ. Japan: List of Cultures, Aspergilli & Yeasts (1955).

17) Castelli, T.: Riv. Viticolt. et Enol., 1(8), 258-64(1948)

Apiculatusmhefe

from grape and fermenting grape must³⁾.

Asporomyces uvae Mrak et McClung ('40)

cf. C. pulcherrima

Bretanomyces sp²⁾.

Br. bruxellensis Kuff. et v. Laer ('21)

as Mt. intermedia from French grape must by Krumbholz and Tauchanoff ('33)

Br. italicus verona et Florenzano ('47)

cf. T. bacillaris

Candida albicans Group²⁾

C. guilliermondii (Cast.) Lang et Guerra ('12)
from turbid bottled wine⁹⁾.

C. krusei (Cast.) Berkhaut ('10)
from wine by Yokotsuka et Goto¹⁶⁾.

C. krusei Group²⁾

C. mycoderma (Reess) Lodder et Rij ('52):

as M. cerevisiae by Hansen (1888);

as M. vini-cerevisiae from wine⁹⁾;

as M. vini-lafarii from wine⁹⁾;

as M. lafarrii-vini from wine⁹⁾;
as M. valida from turbid wine⁹⁾;
as M. vini var. paradoxa from turbid wine⁹⁾;
as M. vini from mucous wine⁹⁾ and sour wine¹⁾;
as M. vini from fermenting wine by De' Rossi ('17);
as M. tenax from fermenting wine by De' Rossi ('17);
as M. duplex from fermenting wine by De' Rossi ('17);
as M. acidificans from fermenting wine by De' Rossi ('17);

from wine by Yokotsuka et Goto¹⁶⁾.

C. parapsilosis (Ashf.) Lang et Talice ('28)
from turbid bottled wine⁹⁾.

C. parapsilosis var. intermedia Rij et Verona ('49)
from turbid bottled wine⁹⁾.

C. pulcherrima (Lindner) Windish ('01)

as T. pulcherrima from grape by Lindner ('01);

as S. pulcherrima from grape by Beijerinck ('12,
'15-16);

as T. pulcherrima from must of Chianti by Castelli ('04);

as T. pulcherrima var. rubra from must of Chianti
by Castelli ('04);

as Asporomyces uvaea from wine²⁾;

as T. pulcherrima from wine²⁾;

as T. pulcherrima from musts of Italy¹⁷⁾.

- C. robusta Diddens et Lodder ('42)
as S. hutensis from wine "vin de huy" by Kufferath
('28)
- C. rugosa (Anderson) Diddens et Lodder ('17)
from turbid California dry white wine¹²⁾.
- C. tropicalis (Cast.) Berkhout ('10)¹³⁾
from wine by Yokotsuka et Goto¹⁶⁾.
- C. variabilis (Lindner) Berkhout ('10)
cf. Sp. carougeai
- C. vulgaris Berkhout ('23)
cf. C. tropicalis
- C. Yokotsukaensis Yo. et Goto ('55) from wine¹⁶⁾.
- Cryptococcus albidus (Saito) Skinner ('22)
2 strains (T-21 & T-31) from turbid wine⁹⁾.
- Cr. laurentii (Kuff.) Skinner ('20)
as T. carnefcens from muscatel by Verona ('37).
- Debaryomyces globosus Klöcker ('09)
cf. S. rosei
- D. maturuchoti Grigoraki et Peju ('21)
cf. D. kloeckeri
- D. kloeckeri Guill. et Peju (19)
from ropy wine¹⁰⁾;
as D. maturuchoti²⁾
- D. vini Zimmermann ('38)
from wine turning slimy in the bottle;
from wine by Yokotsuka et Goto¹⁶⁾.

Hanseniaspora guilliermondii Pijper ('28)

cf. Hs. valbyensis

Hs. valbyensis " Klöcker ('12)

as Hs. guilliermondii²⁾

Hs. sp. Bioletti et Cruess ('12)

Hansenula anomala(Hansen) H. et P. Sydow (1891)

as Willia anomala

as H. anomala var. robusta (S.sphaericus)
from Turkish currants by Beijerinck¹⁾;

as H. panis²⁾;

— from wine by Yokotsuka et Goto¹⁶⁾;
from grape⁷⁾.

H. anomala var. robusta Dekker ('31)

cf. H. anomala

H. panis Castelli ('33)

cf. H. anomala

H. saturnus (Klöcker) H. et p. Sydow ('02)

as Willia saturnus¹³⁾

"
Kaltgarhefe

cf. s. cerevisiae var. ellipsoideus

Kloeckera apiculata (Reess emend. Klöcker) Janke
(1870)

as S. apiculatus from wine must by Reess (1870);

as Ks. uvarum²⁾;

from "muscat blanc" by Niehaus ('32);

as most abundant yeast from musts of Gironde¹⁵⁾;
from musts¹⁷⁾.

K. magna (De' Rossi) Janke ('20)

from grape and grape must in Umbria by De'
Rossi ('20);

as Ks. osmophila from grape by Niehaus ('32);
from mosts¹⁷⁾

Kloeckeraspora osmophila Niehaus ('32)

cf. K. magna

Ka. uvarum Niehaus ('32)

cf. K. apiculata

Lipomyces lipoferus (den Dooren de Jong) Lodder et
van Rij ('52)

as L. lipoferus from grape²⁾

Monilia candida bon sensu Hansen (1886)

cf. C. tropicalis

Mycoderma acidificans De' Rossi ('17)

cf. C. mycoderma

M. duplex De' Rossi ('17)

cf. C. mycoderma

M. cerevisiae Desm. sensu Lederle ('09)

cf. C. mycoderma

M. lafarrii-vini Zimmermann ('38)

cf. C. mycoderma

M. tenax De' Rossi (17)

cf. C. mycoderma

M. valida Lederle ('09)

cf. C. mycoderma

M. vini Desm. sensu Lodder ('34)

cf. C. mycoderma

M. vini-cervisiae Zimmermann ('38)

cf. C. mycoderma

M. vini-lafarii Zimmermann ('38)

cf. C. mycoderma

M. vini var. paradoxa Zimmermann ('38)

cf. C. mycoderma

Mycoderma, Various strains (119 cultures including 8 new sp.)

from 54 Italian wines by Scrivani ('39);

from must and wine by De' Rossi ('17);

from fermenting must³⁾7).

Mycotorula intermedia Krumbh. et Tauschanoff ('33)

cf. B. bruxellensis

Pichia alcoholophila Klöcker ('12)

cf. P. membranaefaciens

P. belgica (Lindner) Dekker ('31)

cf. P. membranaefaciens

P. derossii Castelli ('35)

cf. P. membranaefaciens

P. farinosa (Lindner) Hansen (1894)¹³⁾

from wine¹⁴⁾

P. fermentans Lodder ('32)
from musts of Gironde¹⁵⁾.

P. fermentans f. japonica Kodama et al. ('55)
from grape¹⁶⁾

P. membranaefaciens Hansen (1888)

as Zp. chiantigiana from must of Chianti⁸⁾;

as P. alcholophila,²⁾ 12)

as P. derossii by Castelli ('35);

as P. neerlandica²⁾;

as Zp. chevalieri²⁾;

from sour wine⁹⁾;

from turbid dry white wine¹²⁾;

from wine¹⁴⁾.

P. membranaefaciens f. a Kodama et al. ('52)
from wild grape juice⁴⁾.

P. neerlandica Lodder ('32)

cf. p. membranaefaciens

Pseudosaccharomyces magnus De' Rossi ('20)

cf. K. magna

Rhodotorula mucilaginosa (Jö rg.) Harrison ('09)

as Rh. sanniei²⁾;

as Rh. . glutinis²⁾

from musts of Gironde¹⁵⁾.

Rh. sanniei (Cif. et Red.) Lodder et v. Rij ('52)

cf. Rh. mucilaginosa

Saccharomyces acidifaciens (Nickerson) Lodder et v.
Rij ('52)

as Zs. acidifaciens from a bottle of domestic
red wine turning sour by Nickerson ('43)

as Sd. mestris from the sediment of a sample of
vinegar by Marcilla et Feduchy ('43)
from wine by Yokotsuka¹⁶⁾.

S. apiculatus Reess (1870)

cf. K. apiculata

S. bacillaris Kr. et Krumbh. ('31)

cf. T. bacillaris

S. bayanus Sacc. (1895)

from musts of Gironde¹⁵⁾;
from wine by Yokotsuka¹⁶⁾;
from musts of Italy¹⁷⁾

S. beticus α and β arcilla ('36)

from grape must and from pellicle on wine
which originated from Cordoba.

S. beticus race Marcilla ('36)

cf. S. fermentati

S. carlsbergensis Hansen ('08)

as S. intermedius var. valdensis from grape juice
by Osterwalder ('24);
from grape juice by Eidgenössische Versuchsa-
nstadt at wadenswil ('46);
from grape²⁾.

S. carlsbergensis var. monasensia (Hansen) Dekker ('31)
from turbid dry white wine¹²⁾;
from grape²⁾.

S. cervisiae Hansen (1883)

as S. valesiacus from grape juice by Osterwalder
('24);

as S. ellipsoideus subsp. from must by Steiner
('28);

as "Badische sulphit hefe" very resistant against
sulphurizing
from sediment of wine by Zimmermann ('37)
from turbid dry white wine¹²⁾;

as Zs. priorianus²⁾.
from wine by Yokotsuka¹⁶⁾.

S. cerevisiae var. ellipsoideus (Hansen) Dekker ('31)

as S. ellipsoideus var. major
from must by Castelli ('35);

as S. ellipsoideus var. umbra " ;

as S. cerevisia subsp. orsati Steiner ('24);
strain champagne Cramant from fermenting must
of Cramant by Schoen ('26)

as S. ellipsoideus johannisberg-I&II. Wortmann
(1892);

as "kaltgärhefe" Zimmermann ('37);
from grape²⁾⁷⁾.
from wine by Yokotsuka¹⁶⁾.

S. cerevisiae subsp. orsati Steiner ('24)

- cf. S. cerevisiae var. ellipsoideus
S. cerevisiae subsp. vetrozensis Steiner ('24)
cf. S. cerevisiae
S. chehesiensis prost. et Afrikian ('33)
cf. S. oviformis
S. cheresiensis var. armensiensis Prost et Afrikian
('33)
cf. S. oviformis
S. chevalieri Guilliermond ('14)
from turbid dry white wine¹²⁾.
from musts of Gironde¹⁵⁾
S. chodati Steiner ('24)
cf. S. steinerii
S. ellipsoideus subsp. alpestris Steiner ('24)
cf. S. cerevisiae
S. ellipsoideus subsp. alpinus Steiner ('24)
cf. S. cerevisiae
S. ellipsoidfus subsp. fulliensis var. typica Steiner
('24)
cf. S. cerevisiae
S. ellipsoideus subsp. montibensis Steiner ('24)
cf. S. cerevisiae
S. ellipsoideus subsp. thermophilus Steiner ('24)
cf. S. willianus
S. ellipsoideus var. major Castelli ('38)

- 65-
- cf. S. cerevisiae var. ellipsoideus
S. ellipsoideus var. umbra castelli ('35)
cf. S. cerevisiae var. ellipsoideus
S. ellipsoideus strain Champagne Cramant Fernbach et
Schoen ('22)
cf. S. cerevisiae var. ellipsoideus
S. elongatus Krumbh. ('32)
cf. S. willianus
S. exiguus Hansen (1888)
from wine by Yokostuka¹⁶⁾.
S. fermentati (Saito) Lodder et van Rij ('52)
as S. beticus / from Cordoba grape must by Marcilla,
Alas y Feduchy ('36)
from wine¹⁴⁾.
S. florentinus (Castelli) Lodder et van Rij ('52)
as Zs. florentinus from sulphurized grape must⁸⁾.
S. fructuum Lodder et Rij ('52)
from musts of Gironde¹⁵⁾.
S. heterogenicus Osterw. ('24)
from wine by Yokostuka¹⁶⁾.
S. hutensis nom. nud.
cf. C. robusta
S. intermedius var. valdensis Osterw. ('24)
cf. S. carlsbergensis
S. italicus Castelli ('38)

from must⁸⁾¹⁵⁾.

S. ludwigii var. vini Kroemer et Heinrich ('22)

cf. S. ludwigii

S. mellis (Fabian et Quinet) Lodder et v. Rij ('52)
from wine¹⁴⁾.

S. oviformis Osterw. ('24)

as S. cheresiensis or so-called "Jerez" yeasts;
used for the manufacture of Sherry by Schandel
(9'36);

as S. cheresiensis var. armeniensis from Armenian
wines by Prostosserdow & Afrikian ('33);
from grape juice in Champagne by Osterwalder
('24);
from yeast sediments from Jerez by Niehaus¹⁾;
from turbid dry white wine¹²⁾;
from wine in Porto¹⁾;
from grape²⁾.
from wine by Yokotsuka¹⁶⁾.

S. oviformis var. bisporus Castelli ('38)
from grape juice⁸⁾.

S. pastorianus Hansen (1883)
from grape⁷⁾.

S. pastorianus var. arbignensis Steiner ('24)

cf. S. cerevisiae

S. rosei (Guill.) Lodder et van Rij ('52)

as Zs. globiformis from grape¹¹⁾;

as T. rosei from must by Castelli ('34);

as S. torulosus, from grape juice by Osterwalder ('24);

as D. globosus²⁾;

as Ts. rosei²⁾17);

from wine by Yokotsuka¹⁶⁾.

S. rouxii Boutroux (1883)

as Zs. variabilis from "Edelfaulen Rosinen"¹¹⁾;

as Zs. gracillilis from contaminated wine of Portugal by Karumbholz ('31);

as Zs. vini from sediment of domestic port wine (Dairen) by Naganishi ('28);

as Zs. gracilis var. italicus from concentrated grape must by Sacchetti ('32);
from spoiled dessert wine by Phaff & Douglas ('44);
from wine¹⁴⁾.

S. rouxii var. polymorphus (Kr. et Krumbh.) Lodder et v. Rij ('52)

as Zs. polymorphus f. craterica from concentrated grape must and from ripe grape by Kraemer & Krumbholz ('31);

as Zs. polymorphus f. stellata from concentrated grape must and from ripe grape by Kraemer & Krumbholz ('31);

as Zs. polymorphus f. typica from concentrated grape must and from ripe grape by Kraemer & Krumbholz ('31);

- as Zs. felsineus from concentrated grape must
by Sacchetti ('32);
as Zs. barkeri²⁾.
- S. sphaericus v. Nägeli (1879)
cf. H. anomala
- S. steineri Lodder et van Rij ('52)
as S. chodati from fermenting must from Riddes by
Steiner ('24)
as S. chodati²⁾.
from wine by Yokotsuka¹⁶⁾
- S. stellatus Knoemer et Krumbh. ('31)
cf. T. stellata
- S. torulosus Osterw. ('24)
cf. S. rosei
- S. uvarum Beijerinck (1898)
from musts of Gironde¹⁵⁾;
from musts of Italy¹⁷⁾.
- S. valesiacus Osterw. ('24)
cf. S. cerevisiae
- S. veronae Lodder et van Rij ('52)
from Italian grape by Verona ('51)
- S. willianus Sacc. (1895)
as S. ellipsoideus subsp. thermophilus from
fermenting grape must by Chodat ('28)
as S. elongatus from grape by Krumbholz ('32)

as various Hungarian strains by Iwanowski¹⁾;
from grape must by Castelli ('34)¹⁾;
from sediment of wine by Zimmermann ('37)¹⁾;

Saccharomyces untergruppe A & B from various grape and
must⁵⁾.

Saccharomyces bisporus Castelli ('42)¹³⁾

Sd. ludwigii Hansen (1889)

as S. ludwigii var. vini from strongly sulphurized
grape must by Kroemer & Heinrich ('22)¹³⁾;

This yeast was also isolated from must by
Kroemer ('30) and Castelli ('34)¹⁾

Sd. mestris marcilla et Peduchy ('43)

cf. S. acidifaciens

Schizosaccharomyces liquefaciens Osterw. ('24)

cf. Schizos. pombe

Schizos. octosporus Beijerinck (1884)

from Greek current by Schionning (1895);

from Greek currant by Beijerinck (1894)

Schizos. pombe Lindner (1894)

as Schizos. liquefaciens from sulphurized grape
juice by Osterwalder ('24)

Schizos. versatillis Wickerham et Duprat ('45)

from canned grape juice from Michigan.

Sporotrichum carougeai Langeron ('22)

as "Garungsmonilien"¹³⁾

Sporobolomyces samlonicolor (Fischer et Brebeck)

Kluyver et v. Niel (1894);
from wine¹⁴⁾.

Sulphit hefe

cf. S. cerevisiae

Torulaspora californica Takahashi et Suminoe ('28)

from grape must⁶⁾.

Ts. rosei Guilliermond ('13)

cf. S. rosei

Torulosis bacillaris (Kr. et Krumbh.) Lodder ('31)

as. Br. italicus from grape by Verona & Florenzano
('47);

as. S. bacillaris from "Troocken Beerauslese"¹¹⁾.
from musts of Gironde¹⁵⁾.

T. californicus Mrak et McClung ('40)²⁾.

T. inconspicua Lodder et v. Rij; ('52)
from wine by Yokotsuka et Goto¹⁶⁾.

T. carnescens Verona et Luchetti, ('36)

cf. Cr. laurentii

T. famata (Harrison) Lodder et Rij ('52)
from musts of Gironde¹⁵⁾.

T. fermentans Mrak et McClung ('40)

T. globosa (Olson et Hammer) Lodder et van Rij ('52)
from wine¹⁴⁾.

T. lipoferus Mrak et McClung ('40)

cf. Lip lipoferus

T. pulcherrima (Lindner) Sacc. ('06)

cf. C. pulcherrima

T. pulcherrima var. rubra Castelli ('40)

cf. C. pulcherrima

T. stellata (Kr. et Krumbh.) Lodder ('31)

as S. stellata from "Trocken Beerauslese"¹¹⁾

Torulopsis sp.

from grape⁷⁾.

Trichosporon yamanashiensis Yokotsuka et Goto ('54)

from wine by Yokotsuka & Goto¹⁶⁾.

Willia anomala Hansen ('04)

cf. H. anomala

w. saturnus (Köcker) Hansen ('04)

cf. H. saturnus

willia sp.

from fermenting must³⁾.

Zygopichia chevalieri (Guill.) Klöcker ('24)

cf. P. membranaefaciens

Zp. chevalieri var. membranaefaciens Kodama et al. ('52)

from wild grape juice⁴⁾.

Zp. chiantigiana Castelli ('38)

cf. P. membranaefaciens

Zygosaccharomyces acidifaciens Nickerson ('43)

cf. S. acidifaciens

Zs. barkeri Sacc. et Sydow ('02)

- cf. S. rouxii var. polimorphus
Zs. felsineus Sacchetti ('32)
cf. S. rouxii var. polymorphus
Zs. florentinus Castelli ('38)
cf. S. florentinus
Zs. gracilis Karam. et Krumbh. ('31)
cf. S. rouxii
Zs. gracilis var. italicus Sacchetti ('32)
cf. S. rouxii
Zs. globiformis Kr. et Krumbh. ('31)
cf. S. rosei
Zs. mellis Fabian et Quinet ('28)
cf. S. rouxii
Zs. polymorphus Kr. et Krumbh. f. craterica ('31)
cf. S. rouxii var. polymorbhus
Zs. polymorphus F. stellata ('31)
cf. S. rouxii var. polymorphus
Zs. polymorphus F. typica ('31)
cf. S. rouxii var. polymorphus
Zs. priorianus Klocker ('07)
cf. S. cerevisiae
Zs. variabilis Kr. et Krumbh. ('31)
cf. S. rouxii

2734
Zs. vini Naganishi (*28)

cf. S. rouxii