

Chapter 2

Total Content of Unsaponifiable Matter and Content of Corresponding Chemical Families in Various Plant Seed Oils: Species A to B

Abelmoschus esculentus (L.) Moench—*Malvaceae*

✓ Synonym	<i>Hibiscus esculentus</i> L.
✓ Common names	Okra, gumbo (Eng.); gombo (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Pakistan, Republic of the Congo, Senegal, Sudan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.2 (method not indicated)	Crossley and Hilditch (1951)
	0.5 (method AFNOR/NFT 60-205; extr. <i>n</i> -hexane)	Miralles and Pares (1980)
	0.6–0.7 (method AOCS/Ca 6a-40, 1993; extr. petroleum ether)	Anwar et al. (2011)
Oil in the dried seed	1.6 (method not indicated)	Bouanga-Kalou et al. (2011)
	15.5	Crossley and Hilditch (1951)
	17.7	Miralles and Pares (1980)
	11.7–13.4	Anwar et al. (2011)
	23.4–24.9	Bouanga-Kalou et al. (2011)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fraction	Anwar et al. (2011)
Tocopherols (α -tocopherol is dominant)	66–70 (HPLC)

Abelmoschus ficulneus (L.) Wight & Arn.—*Malvaceae*

✓ Synonym	<i>Hibiscus ficulneus</i> L.
✓ Organ analyzed	Seed
✓ Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.3 (method AOCS, 1973)	Rao et al. (1983)
Oil in the dried seed	14.4	Rao et al. (1983)

Abelmoschus moschatus Medik. ssp. *moschatus*—*Malvaceae*

✓ Synonym	<i>Hibiscus abelmoschus</i> L.
✓ Common names	Musk mallow (Eng.); ambrette (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	India, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.8 (method AOAC, 1970; extr. ethoxyethane)	Sahoo et al. (2003)
	1.5 (method AOAC, 1970; extr. ethoxyethane)	Rao et al. (2005)
Oil in the dried seed	≈ 16	Sahoo et al. (2003)
	14–15	Rao et al. (2005)

Abies alba Mill.—*Pinaceae*

✓ Common names	European silver fir, silver fir (Eng.); sapin blanc, sapin argenté (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Poland

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	6.8 (method described in another paper; extr. ethoxyethane)	Chouda and Jankowski (2005)
Oil in the dried seed	33.3 ^a	Chouda and Jankowski (2005)

^aContent resulting from three successive extractions with different solvents

Abutilon pannosum (G.Forst.) Schltdl.—*Malvaceae*

✓ Organ analyzed	Seed
✓ Origins of the samples	India, Sudan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.3 (method AOCS, 1969)	Kittur et al. (1982)
	1.8 (method not indicated)	Mariod and Matthäus (2008)
Oil in the dried seed	13.4	Kittur et al. (1982)
	7.1	Mariod and Matthäus (2008)

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Mariod and Matthäus (2008)
Tocopherols (α -tocopherol is dominant)	164 (HPLC)

Abutilon ramosum (Cav.) Guill. & Perr.—*Malvaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.5 (method AOCS, 1971)	Farooqi (1986)
Oil in the dried seed	15.8	Farooqi (1986)

Abutilon theophrasti Medik.—*Malvaceae*

✓ Common names	Velvetleaf (Eng.); abutilon d'Avicenne (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	USA

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.0–1.5 (method not indicated)	Carmody et al. (1945)
Oil in the dried seed	15–18	Carmody et al. (1945)

Acacia auriculiformis Benth.—*Fabaceae*

✓ Common name	Northern black wattle (Eng.)
✓ Organ analyzed	Seed
✓ Origins of the samples	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil ^a	1.0 (method AOCS, 1973)	Mandal et al. (1984)
Oil in the dried seed	26	Mandal et al. (1984)
	6.8	Chowdhury et al. (1983)

^aRefined oil according to the method of AOAC, 1973

Acacia cyclops G.Don—*Fabaceae*

✓ Common name	Coastal wattle (Eng.)
✓ Organ analyzed	Seed
✓ Origin of the sample	South africa

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.0 (method not indicated in the abstract)	Black et al. (1949)
Oil in the dried seed	10.0	Black et al. (1949)

Acacia mangium Willd.—*Fabaceae*

✓ Synonym	<i>Acacia holosericea</i> A. Cunn.
✓ Organ analyzed	Seed
✓ Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.5 (method AOCS, 1973)	Prasad and Azeemoddin (1996)
Oil in the dried seed	14.3	Prasad and Azeemoddin (1996)

Acer circinatum Pursh—*Aceraceae*

✓ Common names	Vine maple (Eng.); érable à feuille de vigne (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Poland

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.4 (method described in another paper; extr. ethoxyethane)	Chouda and Jankowski (2005)
Oil in the dried seed	14.9 ^a	Chouda and Jankowski (2005)

^aContent resulting from three successive extractions with different solvents

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Chouda and Jankowski (2005)
Polyprenols	20 (OCLC-TLC)

Acer pseudoplatanus L.—*Aceraceae*

✓ Common names	Sycamore maple (Eng.); érable sycomore (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Poland

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	3.4 (method described in another paper; extr. ethoxyethane)	Chouda and Jankowski (2005)
Oil in the dried seed	12.8 ^a	Chouda and Jankowski (2005)

^aContent resulting from three successive extractions with different solvents

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Chouda and Jankowski (2005)
Polyprenols	10 (OCLC-TLC)

Acer rubrum L.—*Aceraceae*

✓ Common names	Red maple (Eng.); érable rouge (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Poland

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.3 (method described in another paper; extr. ethoxyethane)	Chouda and Jankowski (2005)
Oil in the dried seed	28.8 ^a	Chouda and Jankowski (2005)

^aContent resulting from three successive extractions with different solvents

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Chouda and Jankowski (2005)
Polyprenols	7 (OCLC-TLC)

Acer tataricum L. ssp. *ginnala* (Maxim.) Wesm.—*Aceraceae*

✓ Synonym	<i>Acer ginnala</i> Maxim.
✓ Common names	Amur maple (Eng.); érable du fleuve Amour (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Poland

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.4 (method described in another paper; extr. ethoxyethane)	Chouda and Jankowski (2005)
Oil in the dried seed	36.6 ^a	Chouda and Jankowski (2005)

^aContent resulting from three successive extractions with different solvents

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Chouda and Jankowski (2005)
Polyprenols	68 (OCLC-TLC)

Acrocomia aculeata (Jacq.) Lodd. ex Mart.—*Areceaceae*

✓ Synonym	<i>Acrocomia lasiospatha</i> Wall.; <i>Acrocomia sclerocarpa</i> Mart.
✓ Common names	Coyoli palm (Eng.); acrocome, coyol (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	French Guiana, Trinidad

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.5 (method not indicated)	Collin (1933)
Unsaponifiable matter in the kernel* oil (*frozen kernel)	0.7 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bureau et al. (2003)
Oil in the dried kernel	44.4	Collin (1933)
Oil in the frozen kernel	17.0	Bureau et al. (2003)

Contents of unsaponifiable fractions in kernel oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Bureau et al. (2003)
Sterols (β -sitosterol is dominant)	338–372 (GC)
Tocopherols and tocotrienols (α -tocotrienol is dominant)	3–4 (HPLC)

Actinidia deliciosa (A.Chev.) C.F.Liang & A.R.Ferguson—*Actinidiaceae*

✓ Synonym	<i>Actinidia chinensis</i> Planc. var. <i>deliciosa</i> A. Chev.
✓ Common names	Kiwifruit (Eng.); kiwi (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.3 (imprecise method)	Vital Food Processors Limited (2008)
Oil in the dried seed	30.0	Piombo et al. (2006)

Contents of unsaponifiable fractions in seed oil

Unsaponifiable fractions	Contents (mg/100 g of oil)	
	Piombo et al. (2006)	Van Hoed et al. (2009) ^a
Sterols (β -sitosterol is dominant)	269 (GC)	422 (GC)
Tocopherols (γ -tocopherol is dominant)	31 (HPLC)	1 (HPLC)
Tocotrienols		2 (HPLC)
Squalene		826 (GC)

^aOil obtained by pressure*Adansonia digitata* L.—*Malvaceae*

✓ Common names	Baobab (Eng., Fr.); baobab africain (Fr.)
✓ Organs analyzed	Kernel, seed
✓ Origins of the samples	Madagascar, Nigeria, Sierra Leone

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.7 (method described in another paper; extr. ethoxyethane)	Derbesy and Busson (1968)
	0.5–1.1 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	0.8–1.5 (method described in another paper; extr. ethoxyethane)	Bianchini et al. (1982)
	0.8 (method AOCS, 1975)	Essien et al. (1989)
Unsaponifiable matter in the kernel oil	2.2 (method of Wolff, 1968; extr. ethoxyethane)	Gaydou et al. (1979)
Oil in the dried seed	13.0	Derbesy and Busson (1968)
	8.4–13.2	Bianchini et al. (1982)
Oil in the dried kernel	31.4	Gaydou et al. (1979)

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable compound	Essien et al. (1989)
β -carotene	<0.1 (OCLC-Spectro)

Adansonia grandidieri Baill.—*Malvaceae*

✓ Common name	Baobab de Grandidier (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.5 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	0.7–0.9 (method described in another paper; extr. ethoxyethane)	Bianchini et al. (1982)
Oil in the dried seed	36.4–38.7	Bianchini et al. (1982)

Contents of unsaponifiable fractions in seed oil

	Contents (average) (mg/100 g of oil)
Unsaponifiable fractions	Bianchini et al. (1982)
Sterols (β -sitosterol is dominant)	190 (TLC)
4-Methylsterols	75 (TLC)
Triterpene alcohols	106 (TLC)
Tocopherols (γ -tocopherol is dominant)	297 (TLC)
Hydrocarbons (squalene is dominant)	124 (TLC)
Unidentified fractions	8 (TLC)

Adansonia madagascariensis Baill.—*Malvaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.7 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	1.1 (method described in another paper; extr. ethoxyethane)	Bianchini et al. (1982)
Oil in the dried seed	13.8	Bianchini et al. (1982)

Adansonia fony var. rubrostipa (Jum. & H.Perrier) H.Perrier—*Malvaceae*

✓ Synonym	<i>Adansonia fony</i> Baill.
✓ Organ analyzed	Seed
✓ Origin of the sample	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.9 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	1.3 (method described in another paper; extr. ethoxyethane)	Bianchini et al. (1982)
Oil in the dried seed	10.5	Bianchini et al. (1982)

Adansonia suarezensis H.Perrier—*Malvaceae*

✓ Common name	Baobab de Suarez (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.4 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	0.6 (method described in another paper; extr. ethoxyethane)	Bianchini et al. 1982
Oil in the dried seed	46.2	Bianchini et al. 1982

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Bianchini et al. (1982)
Sterol (β -sitosterol is dominant)	253 (TLC)
4-Methylsterols	60 (TLC)
Triterpene alcohols	91 (TLC)
Tocopherols (γ -tocopherol is dominant)	61 (TLC)
Hydrocarbons (<i>n</i> -alkanes are dominant)	100 (TLC)
Unidentified fractions	35 (TLC)

Adansonia za Baill.—*Malvaceae*

✓ Common name	Baobab za (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.6 (method described in another paper; extr. <i>n</i> -hexane)	Bianchini et al. (1982)
	1.0 (method described in another paper; extr. ethoxyethane)	Bianchini et al. (1982)
Oil in the dried seed	10.9	Bianchini et al. (1982)

Adenanthera pavonina L.—*Fabaceae*

✓ Common names	Red beadtrees (Eng.); bois de condori, arbre à corail (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Nigeria, Democratic Republic of Congo, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.7 (method described in another paper; extr. ethoxyethane)	Derbesy and Busson (1968)
	0.6 (method not indicated)	Kabele Ngiefu et al. (1975)
	0.8 (method AOCS, 1975)	Essien et al. (1989)
Oil in the dried seed	23.0	Derbesy and Busson (1968)
	14.0	Kabele Ngiefu et al. (1975)

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Insaponifiable compound	Essien et al. (1989)
β-Carotene	0.1 (OCLC-Spectro)

Aesculus assamica Griff.—*Hippocastanaceae*

✓ Organ analyzed	Seed
✓ Origin of sample	Vietnam

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.6 (method DGF/C-III, 1953; extr. solvent not indicated)	Franzke et al. (1971)
Oil in the dried seed	39.8	Franzke et al. (1971)

Albizia lebbeck (L.) Benth.—*Fabaceae*

✓ Common name	Lebbeck (Eng.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Senegal, Sudan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	3.5 (method described in another paper; extr. 2-isopropoxypropane)	Miralles (1982)
	1.4 (method not indicated)	Mariod and Matthäus (2008)
Oil in the dried seed	6.2	Miralles (1982)
	12.8	Mariod and Matthäus (2008)

Contents of unsaponifiable fractions in seed oil

Unsaponifiable fractions	Contents (mg/100 g of oil)	
	Miralles (1982)	Mariod and Matthäus (2008)
Sterols (β -sitosterol is dominant)	1,330 (TLC)	
4-Methylsterols	105 (TLC)	
Triterpene alcohols (cycloartenol is dominant)	630 (TLC)	
Tocopherols (α -tocopherol is dominant)	770 (TLC)	83 (HPLC)
Tocotrienols		– (HPLC)
Hydrocarbons and carotenoids	665 (TLC)	

Aleurites moluccana (L.) Willd.—*Eupobiaceae*

✓ Common names	Candlenut, kukuinut tree (Eng.); bancoulier (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Vietnam, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.4 (method DGF/C-III, 1953; extr. solvent not indicated)	Franzke et al. (1971)
	0.3 (method Schwartz, 1988)	Schwartz (1988)
Oil in the dried seed	57.3	Franzke et al. (1971)

Allanblackia floribunda Oliv.—*Clusiaceae*

✓ Organ analyzed	Kernel
✓ Origins of the samples	Democratic Republic of Congo, Ghana, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	≤ 0.1 (method not indicated)	European Commission 2008
	0.5 (method AOCS/Ca 6a-40, 1993; extr. petroleum ether)	Wilfred et al. (2010)
Oil in the dried kernel	67.6	Wilfred et al. (2010)

Alliaria petiolata (M.Bieb.) Casara & Grande—*Brassicaceae*

✓ Synonym	<i>Alliaria officinalis</i> Andr. ex M. Bieb.
✓ Common names	Garlic mustard (Eng.); alliaire (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Mediterranean

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.1 (method IUPAC/2.401, 1979; except extr. with 2-methoxy-2-methylpropane)	Ucciani et al. (1994)
Oil in the dried seed	15.4	Ucciani et al. (1994)

Allium cepa L.—*Liliaceae*

✓ Common names	Onion (Eng.); oignon (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	India, oil from a company (Parry et al. 2006)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.2 (method not indicated)	Badami and Patil (1975)
	1.4 (method AOCS, 1981)	Narasimha Reddy et al. (1989)
Oil in the dried seed	18.0	Badami and Patil (1975)
	22.7	Narasimha Reddy et al. (1989)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil ^a)
Unsaponifiable fractions	Parry et al. (2006)
Tocopherols (α -tocopherol is dominant)	68–93 (HPLC)
Carotenoids (zeaxanthin is dominant)	0.2 (HPLC)

^aOil obtained by pressure*Amaranthus hybridus* L.—*Amaranthaceae*

✓ Common names	Slim amaranth (Eng.); Amarante hybride (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Argentina, Brazil, China, Mexico, Republic of the Congo, USA

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	5.3–7.2 (method not indicated)	Dhellot et al. (2006)
Oil in the dried seed	8.5–14	Dhellot et al. (2006)
	2.4–7.0	He and Corke (2003)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable compound	He and Corke (2003)
Squalene	2,300–7,300 (HPLC)

Ambrosia artemisiifolia* var. *elator* (L.) Descourt.—*Asteraceae

✓	Synonym	<i>Ambrosia elator</i> L.
✓	Common names	Common ragweed (Eng.); ambroisie annuelle (Fr.)
✓	Organ analyzed	Achene
✓	Origine of the sample	USA

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	1.8 (method not indicated)	Roedel and Thornton (1942)
Oil in the dried achene	18.3	Roedel and Thornton (1942)

Amygdalus scoparia* Spach—*Rosaceae

✓	Organ analyzed	Kernel
✓	Origins of the samples	Iran

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	5.3 (method AFNOR, 1988; adapted)	Farhoosh and Tavakoli (2008)
Oil in the dried kernel	44.1	Aitzetmuller and Ihrig (1988)

Contents of unsaponifiable fractions in kernel oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Farhoosh and Tavakoli (2008)
Tocopherols	75 (Spectro)

Anabasis aphylla* L.—*Chenopodiaceae

✓	Organ analyzed	Seed
✓	Origin of the sample	Doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	6.4 (method not indicated)	Umarov et al. (1970)
Oil in the dried seed	16.3	Umarov et al. (1970)

Anacardium occidentale* L.—*Anacardiaceae

✓	Common names	Cashew (Eng.); anacardier (Fr)
✓	Organ analyzed	Kernel
✓	Origins of the samples	Brazil, India, Indonesia, Thailand, doubtful, oil from a company (Gómez-Caravaca et al. 2010)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.6 (method described; extr. 2-isopropoxypropane)	Jeong et al. (1974)
	0.2 (method of Schwartz, 1988)	Schwartz (1988)
	0.9–1.9 (method NGD/C-12, 1976)	Gallina Toschi et al. (1993)
	0.3–0.5 (method described; extr. <i>n</i> -hexane)	Kornsteiner et al. (2006)
Oil in the kernel seed	49	Jeong et al. (1974)
	43–50	Gallina Toschi et al. (1993)
	44.8–49.1	Kornsteiner et al. (2006)

Contents of unsaponifiable fractions in kernel oil

	Contents (mg/100 g of oil)			
	Jeong et al. (1974)	Gallina Toschi et al. (1993)	Kornsteiner et al. (2006)	Gómez-Caravaca et al. (2010) ^a
Unsaponifiable fractions				
Sterols [β -sitosterol is dominant according to Gallina Toschi et al. (1993)]	312 (TLC)			
Triterpene alcohols	72 (TLC)			
4-Methylsterols [cycloeucalenol is dominant according to Jeong et al. (1975)]	36 (TLC)			
Tocopherols [β -tocopherol is dominant according to Gómez-Caravaca et al. (2010)]		52–95 (HPLC)	5–6 (HPLC)	171 (HPLC)
3-Alkenylphenols ^b				15 (GC)
Apolar lipids (hydrocarbons etc.)	180 (TLC)			

^aOil obtained by pressure
^bSeveral areas of components in the chromatographic profile are not in accordance with values reported

Andrographis paniculata (Burm.f.) Nees—*Acanthaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.3 (method not indicated ^a)	Badami and Alagawadi (1983)
Oil in the dried seed	39.4	Badami and Alagawadi (1983)

^aNor in another paper mentioned by the authors

Anethum graveolens L.—*Apiaceae*

✓ Common names	Dill (Eng.); aneth odorant (Fr.)
✓ Organ analyzed	Fruit
✓ Origins of the samples	Bulgaria, Pakistan, Vietnam

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the fruit oil	1.2 (method not indicated)	Khalid et al. (2005)
Oil in the dried fruit	15.3	Khalid et al. (2005)
	17.2	Zlatanov and Ivanov (1995)
	18.2	Matthäus et al. (2003)

Contents of unsaponifiable fractions in fruit oil

	Contents (mg/100 g of oil)	
Unsaponifiable fractions	Zlatanov and Ivanov (1995)	Matthäus et al. (2003)
Sterols	≈ 300 (TLC)	
Tocopherols (α-tocopherol is dominant)	16 (HPLC)	
Tocotrienols (α-tocotrienol is dominant)	20 (HPLC)	
Plastochromanol-8	5 (HPLC)	

Annona squamosa L.—*Annonaceae*

✓ Common names	Custard apple (Eng.); pomme cannelle (Fr.)
✓ Organ analyzed	Seed
✓ Origins of sample	India, Sudan, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.6 (method AOCS, 1971)	Ansari et al. (1985)
	1.0 (method BS/684, 1958)	Ahmed et al. (1996)
Oil in the dried seed	23.0	Ansari et al. (1985)
	27.5	Mariod et al. (2010)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)	
Unsaponifiable fractions	Ahmed et al. (1996)	Mariod et al. (2010)
Sterols	251 (TLC)	
Tocopherols		16 (HPLC)
Fatty alcohols	541 (TLC)	
Hydrocarbons	208 (TLC)	

Antiaris toxicaria ssp. africana (Engl.) C.C.Berg—*Moraceae*

✓ Synonym	<i>Antiaris Africana</i> Engl.
✓ Organ analyzed	Seed
✓ Origin of the sample	Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	6.5 (method described; extr. ethoxyethane)	Esuoso et al. (2000)
Oil in the dried seed	68.8	Esuoso et al. (2000)

Contents of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Esuoso et al. (2000)
Hydrocarbons	4,100 (TLC)

Aphanamixis polystachya (Wall.) R.Parker—*Meliaceae*

✓ Synonym	<i>Amoora rohituka</i> (Roxb.) Wight & Arn.
✓ Organ analyzed	Seed
✓ Origins of the samples	Inde

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	5.8 (method not indicated) 2.6 (method AOCS, 1973)	Sengupta and Mazumder (1976) Daulatabad and Jamkhandi (1997)
Oil in the dried seed	35 41.4	Sengupta and Mazumder (1976) Daulatabad and Jamkhandi (1997)

Aphyllantes monspeliensis L.—*Liliaceae*

✓ Common name	Aphyllante de Montpellier (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	France

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	6.7 (method of a thesis; extr. 2-isopropoxypropane)	Viano and Gaydou (1984)
Oil in the dried seed	32.5	Viano and Gaydou (1984)

Arachis hypogaea L.—*Fabaceae*

✓ Common names	Peanut, groundnut (Eng.); arachide, cacahuète (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	More than 15 different countries, doubtful, oils of companies (Itoh et al. 1973; Kornfeldt and Croon 1981; McGill et al. 1993; De Greyt et al. 1998; Phillips et al. 2002; Itoh et al. 1974)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.4 (method described; extr. 2-isopropoxypropane)	Itoh et al. (1973)
	1.1 (one of the two methods of Wolff, 1968; but extr. solvent not indicated)	Gaydou et al. (1983)
	0.3–0.4 (method Schwartz, 1988)	Schwartz (1988)
	0.4–0.6 (method described; extr. <i>n</i> -hexane)	Kornsteiner et al. (2006)
	≤1.0 (method ISO/3596:2000 or AOCS/Ca 6b-53; extr. ethoxyethane or ISO/18609:2000; extr. <i>n</i> -hexane)	Codex Alimentarius 2009
Oil in the dried seed	46.7	Gaydou et al. (1983)
	49.4–53.8	Kornsteiner et al. (2006)

Contents of unsaponifiable fractions in seed oil							
Contents (mg/100 g of oil)							
Unsaponifiable fractions	Itoh et al. (1973)	Codex Alimentarius (2009)	Kornfeldt and Croon (1981)	Rossell et al. (1983)	McGill et al. (1993)	De Greyt et al. (1998)	Maguire et al. (2004)
Sterols (β-sitosterol is dominant)	240 (TLC)	90–290 (GC)	321 (GC)	90–285 (GC)		153–171 (GC)	
4-Methylsterols	16 (TLC)		18 (GC)				
Triterpene alcohols	36 (TLC)		17 (GC)				
[24-methylene-cycloartanol is dominant according to Itoh et al. (1974)]							
Tocopherols		17–130 (HPLC)		45–90 (HPLC)		40–46 (HPLC)	
[γ-tocopherol is dominant according to Rossell et al. (1983)]							
Tocotrienols		– (HPLC)					
Hydrocarbons and aliphatic alcohols	108 (TLC)				3–4 (HPLC)		
<i>n</i> -Alkanes (C _{15–33})							10 (HPLC)
Squalene							

Arctium tomentosum Mill.—*Asteraceae*

✓ Common names	Wooly burdock (Eng.); bardane poilue (Fr.)
✓ Organ analyzed	Achene
✓ Origin of the sample	Mediterranean

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	1.6 (method IUPAC/2.401, 1979; but extr. 2-methoxy-2-methylpropane)	Ucciani et al. (1994)
Oil in the dried achene	11.6	Ucciani et al. (1994)

Argania spinosa (L.) Skeels—*Sapotaceae*

✓ Common names	Argan tree (Eng.); arganier (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	Marocco

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	1.0 (method IUPAC/II. D.5) 0.8 (method IUPAC/2.401, 1979)	Huyghebaert and Hendricks (1974) Farines et al. (1984)
Oil in the dried kernel	50	Farines et al. (1984)

Contents of unsaponifiable fractions in kernel oil

	Contents (mg/100 g of oil)	
Unsaponifiable fractions	Farines et al. (1984)	Khallouki et al. (2003)
Sterols (shottenol and spinasterol are dominant)		272–295 (GC)
Triterpene alcohols and 4-methylsterols	160 (OCLC)	
Tocopherols (γ -tocopherol is dominant)	64 (Spectro)	63–64 (HPLC)
Squalene		311–319 (GC)

Argemone mexicana L.—*Papaveraceae*

✓ Common names	Mexican princkly poppy (Eng.), Argémone mexicaine (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Bengladesh, India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.2–1.5 (method AOCS, 1955; extr. ethoxyethane)	Ahmed et al. (2011)
Oil in the dried seed	34.5–35.0 22–33	Ahmed et al. (2011) Ghosh et al. (2005)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable compounds	Ghosh et al. (2005)
Dihydrosanguinarine	313–404 (TLC)
Sanguinarine	171–222 (TLC)

Argyrea osyrensis (Roth) Choisy var. *osyrensis*—*Convolvulaceae*

✓ Synonym	<i>Argyrea aggregata</i> Arn. ex Choisy
✓ Organ analyzed	Seed
✓ Origin of the sample	Doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.9 (method AOCS, 1973)	Kittur et al. (1987)
Oil in the dried seed	13.5	Kittur et al. (1987)

Aristolochia littoralis Parodi—*Aristolochiaceae*

✓ Synonym	<i>Aristolochia elegans</i> Mast.
✓ Organ analyzed	Seed
✓ Origin of the sample	Senegal

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.0 (method AFNOR/NFT 60-205, 1976; extr. <i>n</i> -hexane)	Miralles and Pares (1980)
Oil in the dried seed	25.0	Miralles and Pares (1980)

Artemisia absinthium L.—*Asteraceae*

✓ Common names	Absinthe (Eng., Fr.), common wormwood (Eng.)
✓ Organ analyzed	Achene
✓ Origin of the sample	Ouzbekistan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	3.5 (method not indicated)	Ul'chenko et al. (1980)
Oil in the dried achene	31.5	Ul'chenko et al. (1980)

Artemisia biennis Willd.—*Asteraceae*

✓ Common names	Biennial wormwood (Eng.); armoise biannuelle (Fr.)
✓ Organ analyzed	Achene
✓ Origin of the sample	Canada

Unsaponifiable matter and oil contentd

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	≤5.3 (method AOCS, 1957)	Coxworth (1965)
Oil in the dried achene	28	Coxworth (1965)

Artemisia caerulescens L.—*Asteraceae*

✓ Common names	Encens de mer, armoise bleuâtre (Fr.)
✓ Organ analyzed	Achene
✓ Origin of the sample	France

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	1.7 (method AFNOR/NFT 60-205, 1981; extr. <i>n</i> -hexane)	Ferlay et al. (1993)
Oil in the dried achene	40.5	Ferlay et al. (1993)

Arthropodium cirrhatum (G.Forst) R.Br.—*Asparagaceae*

✓ Organ analyzed	Seed
✓ Origins of the samples	New Zealand

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.4–2.7 (method Cocks, 1933; extr. ethoxyethane)	Morice (1969)
Oil in the dried seed	20.5–23.0	Morice (1969)

Artocarpus altilis (Parkinson) Fosberg—*Moraceae*

✓ Synonym	<i>Artocarpus communis</i> J.R.Forst. et G.Forst
✓ Common names	Breadfruit (Eng.); arbre à pain (Fr.)
✓ Organs analyzed	Seed, fruit or dehulled seed (?)
✓ Origins of the samples	Democratic Republic of the Congo, Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the fresh fruit (or dehulled fresh seed ?) oil	2 (method BS/ 684, 1976)	Achinewhu and Akpapunam (1985)
Oil in the dried seed	29.0	Kabele Ngiefu et al. (1976)

Asclepias syriaca L.—*Asclepiadaceae*

✓ Common names	Common milkweed (Eng); herbe à la ouate (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Canada, USA

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.8–2.2 (method not indicated)	Chisholm and Hopkins (1960)
Oil in the dried seed	19.4–22.7	Chisholm and Hopkins (1960)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fraction	Abidi (2003)
Tocopherols	0–70 (HPLC)

Asimina triloba (L.) Dunal—Annonaceae

✓ Common names	Pawpaw (Eng.); asiminier (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	USA

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.8 (method described in a very old book)	Riebsomer et al. (1938)
Oil in the dried seed	38	Riebsomer et al. (1938)

Asparagus officinalis L.—Asparagaceae

✓ Common names	Asparagus (Eng.); asperge (Fr.)
✓ Organ analyzed	Seed
✓ Origine of the sample	New zealand

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.5 (method Cocks, 1933; extr. ethoxyethane)	Morice (1967)
Oil in the dried seed	16	Morice (1967)

Asphodelus fistulosus L.—Liliaceae

✓ Common names	Onionweed (Eng.); asphodèle fistuleux (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	New Zealand, Pakistan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.8–1.9 (method AOAC, 1955; extr. ethoxyethane)	Khan et al. (1961)
	1.9 (method Cocks, 1933; extr. ethoxyethane)	Morice (1967)
Oil in the dried seed	21	Morice (1967)

Aspilia latifolia Oliv. & Hiern—*Asteraceae*

✓ Organ analyzed	Achene
✓ Origin of the sample	Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	0.5 (method AOAC, 1980; extr. ethoxyethane)	Eguavoen and Pervez (1990)
Oil in the dried achene	75.0	Eguavoen and Pervez (1990)

Astelia spp.—*Asteliaceae*
(Thirteen and fourteen species analyzed)

✓ Organ analyzed	Seed
✓ Origins of the samples	New Zealand

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.1–3.6 (method Cocks, 1933; extr. ethoxyethane)	Morice (1967)
	1.1–4.0 (method Cocks, 1933; extr. ethoxyethane)	Morice (1975)
Oil in the dried seed	12.8–48.4	Morice (1967)
	8.2–36.7	Morice (1975)

Astrocaryum aculeatum G.Mey.—*Arecaceae*

✓ Synonym	<i>Astrocarium tucuma</i> Mart.
✓ Common names	Tucuma (Eng.); tucum (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	Malaysia, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.4 (method not indicated)	Collin (1933)
	0.5–1.0 (method not indicated)	Mensier (1957)
Oil in the dried kernel	39.8	Collin (1933)
	24–38	Mensier (1957)

Astrocaryum murumuru Mart.—*Arecaceae*

✓ Common name	Murumuru palm (Eng.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	Brazil

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.9 (method AOCS/Ca 6b-53, 1988; extr. ethoxyethane)	Mambrim and Barrera-Arellano (1997)
Oil in the dried kernel	27.7	Mambrim and Barrera-Arellano (1997)
	42.7	Litchfield (1970)

Contents of unsaponifiable fractions in kernel oil

	Content (mg/100 g of oil)
Unsaponifiable fraction	Mambrim and Barrera-Arellano (1997)
Carotenoids	0.5 (Spectro)

Astrocaryum vulgare Mart.—*Arecaceae*

✓ Common names	Tucum palm, tucuma palm (Eng.); awara (Fr.)
✓ Organs analyzed	Mesocarp (pulp), kernel
✓ Origins of the samples	Brazil, French Guiana

Unsaponifiable mater and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the dried pulp oil	2.2 (method AOCS/Ca 6b-53, 1988; extr. ethoxyethane)	Mambrim and Barrera-Arellano (1997)
Unsaponifiable matter in the fresh pulp oil	1.0 (method AFNOR, NFT 60-205)	Lubrano and Robin (1997)
	0.8 (method described; extr. <i>n</i> -hexane)	Bony et al. (2012)
Unsaponifiable matter in the pulp* oil (*frozen pulp)	0.3 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bereau (2001)
Unsaponifiable matter in the dried kernel oil	1.1 (method AOCS/Ca 6b-53, 1988; extr. ethoxyethane)	Mambrim and Barrera-Arellano (1997)
Unsaponifiable matter in the kernel* oil (*frozen kernel)	0.7 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bereau et al. (2003)
Oil in the dried pulp	18.2	Mambrim and Barrera-Arellano (1997)
Oil in the frozen pulp	16.5 ^a	Bereau (2001)
Oil in the fresh pulp	9.5	Lubrano and Robin (1997)
Oil in the dried kernel	29.6	Mambrim and Barrera-Arellano (1997)
Oil in the frozen kernel	9.6	Bereau et al. (2003)

^aContent expressed to dry matter

Contents of unsaponifiable fractions in pulp oil

Unsaponifiable fractions	Contents (mg/100 g of pulp oil)		
	Mambrim and Barrera-Arellano (1997)	Bony et al. (2012)	Bureau (2001)
Sterols (β -sitosterol is dominant)			107–142 (GC)
Sterols and triterpene alcohols		143 ^a (GC)	
Tocopherols and tocotrienols (α -tocopherol is dominant)		15 (HPLC)	4 (HPLC)
Carotenoids	242 (Spectro)	164 ^b (HPLC)	
Squalene		6 (GC)	

^aResult expressed as 5 α -cholestan-3 β -ol^bResult expressed as β -carotene

Contents of unsaponifiable fractions in kernel oil

Unsaponifiable fractions	Contents (mg/100 g of kernel oil)	
	Mambrim and Barrera-Arellano (1997)	Bureau et al. (2003)
Sterols (β -sitosterol is dominant)		211–214 (GC)
Tocopherols		1–2 (HPLC)
Carotenoids	<1 (Spectro)	

Attalea maripa (Aubl.) Mart.—*Arecaceae*

✓ Synonyms	<i>Maximiliana caribaea</i> Griseb. & H. Wendl.; <i>Maximiliana maripa</i> Drude; <i>Maximiliana regia</i> Mart.
✓ Commun name	Maripa palm (Eng.)
✓ Organs analyzed	Kernel, mesocarp (pulp)
✓ Origins of the samples	French Guiana

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel* oil (*frozen kernel)	0.6 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bureau et al. (2003)
Unsaponifiable matter in the pulp* oil (*frozen pulp)	1.0 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bureau (2001)
Oil in the frozen kernel	31.3	Bureau et al. (2003)
Oil in the frozen pulp	13.6 ^a	Bureau (2001)

^aContent expressed to dry matter

Contents of unsaponifiable fractions in oils

	Contents (mg/100 g of kernel oil)		Contents (mg/100 g of pulp oil)	
	Bereau et al. (2003)	Bereau et al. (2001)	Bereau (2001)	Bereau et al. (2001)
Unsaponifiable fractions				
Sterols (β -sitosterol is dominant)	109–136 (GC)		57–62 (GC)	
Tocopherols (α -tocopherol is dominant)		0.4 (HPLC)	10–14 (HPLC)	12 (HPLC)
Tocotrienols		1 (HPLC)	4–10 (HPLC)	7 (HPLC)

Attalea spp. (including *Attalea speciosa* Mart. ex Spreng.)—*Areaceae*

✓ Synonym	<i>Orbignya</i> spp. (including <i>Orbignya oleifera</i> Burret)
✓ Common names	Babassu (Eng.); babassou (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	Brazil, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.8 (method NGD, 1976) ≤ 1.2 (method ISO/3596:2000 or AOCS/Ca 6b-53; extr. ethoxyethane or ISO/18609:2000; extr. <i>n</i> -hexane)	Oliveira et al. (1993) Codex Alimentarius (2009)
Oil in the dried kernel	47.0 60.8 ^a	Oliveira et al. (1993) Litchfield (1970)

^aOil from *Attalea speciosa*

Contents of unsaponifiable fractions in kernel oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Codex Alimentarius (2009) Oliveira et al. (1995)
Sterols (β -sitosterol is dominant)	50–80 (GC) 83–92 (TLC)
Tocopherols	– (HPLC)
Tocotrienols	6–13 (HPLC)

Atuna racemosa Raf.—*Chrysobalanaceae*

✓ Synonym	<i>Parinarium laurinum</i> A. Gray
✓ Organ analyzed	Kernel
✓ Origin of samples	Fiji

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.9–1.2 (method Cocks, 1933; extr. ethoxyethane)	Riley (1950)
Oil in the dried kernel	12.0–12.9	Riley (1950)

Averrhoa carambola L.—*Oxalidaceae*

✓ Common names	Carambola, starfruit (Eng.); carambolier (Fr.)
✓ Organ analyzed	Kernel
✓ Origin of the sample	Malaysia

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	3.0 (method AOAC, 1970; extr. ethoxyethane)	Berry (1978)
Oil in the dried kernel	73.9	Berry (1978)

Azadirachta indica A.Juss.—*Meliaceae*

✓ Common names	Neem (Fr., Eng.); margosier (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	Benin, Brazil, India, Senegal, oil from a company (Forim et al. 2010)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	1.4 (method not indicated)	Rukmini (1987)
	1.2 (or 1.0) (method IUPAC, 1987)	Djenontin et al. (2012)
Oil in the dried kernel	44.0	Djenontin et al. (2012)
	18.5–52.5	Kumar and Parmar (1996)
	34.6–50.0	Gupta et al. (2010)
	44.6–55.5	Faye (2011)
Oil in the dried seed	31.9–38.3	Faye (2011)

Contents of unsaponifiable fractions in oils

Unsaponifiable fractions	Contents (mg/100 g of kernel oil)				Contents (mg/100 g of seed oil)	
	Kumar and Parmar (1996)	Isman et al. (1990)	Forim et al. (2010) ^a	Forim et al. (2010) ^b	Djenontin et al. (2012)	Faye (2011)
Sterols (β -sitosterol is dominant)					188 (GC)	314–507 (GC)
Tocopherols (γ -tocopherol is dominant)					30 (HPLC)	
Limonoids (tetranortriterpenoids) (the three main)	0–4 715 (HPLC)					
Azadirachtin ^c	0–232 (HPLC)	0–403 (HPLC)	23–63 (HPLC)	86–158 (HPLC)		

^aKernel oil from Brazil^bKernel oil from India^cThe best known and studied limonoid of *Azadirachta indica**Bactris gasipaes* Kunth—*Arecaceae*

✓ Common names	Peach palm, pejibaye palm (Eng.); palmier pêche (Fr.)
✓ Organ analyzed	Kernel, mesocarp with epicarp (pulp)
✓ Origins of the samples	French Guiana

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the frozen pulp oil	0.4 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bureau (2001)
Unsaponifiable matter in the kernel* oil (*frozen kernel)	0.8 (method AFNOR/NFT 60-205, 1984; extr. <i>n</i> -hexane)	Bureau et al. (2003)
Oil in the frozen pulp	31.2 ^a	Bureau (2001)
Oil in the frozen kernel	16.4	Bureau et al. (2003)

^aContent expressed to dry matter

Contents of unsaponifiable fractions in oils

Unsaponifiable fractions	Contents (mg/100 g of pulp oil)	Contents (mg/100 g of kernel oil)
	Bureau (2001)	Bureau et al. (2003)
Sterols (β -sitosterol is dominant)	68–91 (GC)	200–204 (GC)
Tocopherols	1 (HPLC)	
Tocotrienols	– (HPLC)	

***Bactris guineensis* (L.) H.E.Moore—Arecaceae**

✓ Synonym	<i>Bactris piritu</i> (H.Karst) H.Wendl.
✓ Organ analyzed	Seed
✓ Origin of the sample	Venezuela

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.0 (method COVENIN, 1984; extr. <i>n</i> -hexane)	Belén et al. (2004)
Oil in the dried seed	39.4	Belén et al. (2004)

***Balanites aegyptiacus* (L.) Delile—Zygophyllaceae**

✓ Common names	Desert date (Eng.); dattier du désert, datte amère (Fr.)
✓ Organs analyzed	Kernel, seed
✓ Origins of the samples	Egypt, India, Nigeria, Senegal, Sudan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	2.0 (method AOCS, 1946)	Hussain et al. (1949)
	2.1 (method not indicated)	Abdel-Rahim et al. (1986)
	1.6 (method described; extr. <i>n</i> -hexane)	Dial Ndiaye (1997)
Unsaponifiable matter in the seed oil	0.7 (method not described; refers to a book without method)	Jain and Banerjee (1988)
Oil in the dried kernel	46.5	Hussain et al. (1949)
	52.8	Dial Ndiaye (1997)
Oil in the dried seed	45	Jain and Banerjee (1988)
	42.4	Hardman et al. (1970)

Contents of unsaponifiable fractions in oils

	Contents (mg/100 g of kernel oil)	Content (mg/100 g of seed oil)
Unsaponifiable fractions	Dial Ndiaye (1997)	Hardman et al. (1970)
Sterols (β -sitosterol is dominant)	182 (TLC)	
Tocopherols	89 (HPLC)	
Alkanes		10 (TLC)

***Baphia nitida* Lodd.—Fabaceae**

✓ Common names	Camwood (Eng.); bois de cam (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.5 (method described; extr. ethoxyethane)	Adewuyi et al. (2009)
Oil in the dried seed	27.1	Adewuyi et al. (2009)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Adewuyi et al. (2009)
Sterols	825 (TLC)
Triterpene alcohols	550 (TLC)
<i>n</i> -Alkanes	400 (TLC)
Unidentified fractions	725 (TLC)

Basella alba* L.—*Basellaceae

✓ Synonym	<i>Basella rubra</i> L.
✓ Common names	Malabar spinach, Ceylon spinach (Eng.); épinard de Malabar (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	India, Vietnam

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.5 (method not indicated)	Daulatabad and Ankalgi (1983)
Oil in the dried seed	24.0	Daulatabad and Ankalgi (1983)
	23.2	Matthäus et al. (2003)

Contents of unsaponifiable fractions in seed oil

	Contents(mg/100 g of oil)
Unsaponifiable fractions	Matthäus et al. (2003)
Tocopherols (γ -tocopherol is dominant)	49 (HPLC)
Tocotrienols	– (HPLC)

Bauhinia monandra* Kurz—*Fabaceae

✓ Common names	Butterfly-flower, Jerusalem date (Eng.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Nigeria, India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.5 (method not indicated)	Badami and Daulatabad (1969)
Oil in the dried seed	11.0	Badami and Daulatabad (1969)

Content of unsaponifiable fractions in seed oil

	Content (mg/100 g of oil)
Unsaponifiable compound	Essien et al. (1989)
β-carotene	0.2 (OCLC-Spectro)

Bauhinia petersiana Bolle—*Fabaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	Botswana

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	<0.1 (method IUPAC, 1979)	Ketshajwang et al. (1998)
Oil in the dried seed	20.8	Ketshajwang et al. (1998)

Bauhinia purpurea L.—*Fabaceae*

✓ Common names	Butterfly orchid tree (Eng.); arbre aux orchidées mauves (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.8 (method not indicated)	Badami and Daulatabad (1969)
Oil in the dried seed	22.0	Badami and Daulatabad (1969)
	17.5	Ramadan et al. (2006b)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Ramadan et al. (2006b)
Sterols (β-sitosterol is dominant)	592 (GC)
Tocopherols (β-tocopherol is dominant)	356 (HPLC)

Bauhinia racemosa Lam.—*Fabaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	4.2 (method not described, refers to a reference without method)	Amoo and Moza (1999)
Oil in the dried seed	15.5	Amoo and Moza (1999)

Bauhinia roxburghiana* Voigt—*Fabaceae

✓	Synonym	<i>Bauhinia retusa</i> Roxb.
✓	Organ analyzed	Seed
✓	Origins of the samples	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	4.8 (method described; extr. ethoxyethane)	Saeed et al. (1991)
Oil in the dried seed	18.6	Prakash et al. (2001)

Bauhinia variegata* L.—*Fabaceae

✓	Common names	Mountain ebony, orchid tree (Eng.); arbre de Saint-Thomas (Fr.)
✓	Organ analyzed	Seed
✓	Origin of the sample	Senegal

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.6 (method AFNOR/NFT 60-205, 1976; extr. <i>n</i> -hexane)	Miralles and Pares (1980)
Oil in the dried seed	22.7	Miralles and Pares (1980)

Benincasa hispida* (Thunb. ex Murray) Cogn.—*Cucurbitaceae

✓	Synonym	<i>Benincasa cerifera</i> Savi
✓	Common names	Waxgourd (Eng.); courge cireuse, pastèque de Chine (Fr.)
✓	Organ analyzed	Kernel
✓	Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.8 (method AOCS/Ca 6a-40, 1946; extr. petroleum ether)	Chowdhury et al. (1955)
Oil in the dried kernel	48.3	Chowdhury et al. (1955)

Bertholletia excelsa* Humb. & Bonpl.—*Lecythidaceae

✓	Common names	Brazil nut (Eng.); Noyer du Brésil (Fr.)
✓	Organ analyzed	Kernel
✓	Origins of samples	Brazil, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.6 (method AOCS, 1957)	Elias and Bressani (1961)
	0.5 (method Schwartz, 1988)	Schwartz (1988)
	1.1 (method NGD/C-12 (B), 1976; extr. ethoxyethane)	Gomes Da Silva et al. (1997)
	0.4–0.7 (method described; extr. <i>n</i> -hexane)	Kornsteiner et al. (2006)
Oil in the dried kernel	69.7	Elias and Bressani (1961)
	66.6	Gomes Da Silva et al. (1997)
	66.2–69.5	Kornsteiner et al. (2006)
	67.4	Miraliakbari and Shahidi (2008)

Contents of unsaponifiable fractions in kernel oil

	Contents (mg/100 g of oil)		
	Gomes Da Silva et al. (1997)	Kornsteiner et al. (2006)	Miraliakbari and Shahidi (2008)
Unsaponifiable fractions			
Sterols (β -sitosterol is dominant)			192–206 (GC)
Tocopherols (γ -tocopherol is dominant)	29 (HPLC)	8–19 (HPLC)	17–20 (HPLC)

Betula platyphylla ssp. *mandshurica* (Regel) Kitag—*Betulaceae*

✓	Synonym	<i>Betula platyphylla</i> var. <i>japonica</i> (Miq.) H. Hara
✓	Common names	Japanese white birch, asian white birch (Eng.)
✓	Organ analyzed	Seed
✓	Origins of the samples	Japan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.9–3.5 (method not indicated)	Ihara and Tanaka (1980)
Oil in the dried seed	19.1–28.1	Ihara and Tanaka (1980)

Bidens engleri O.E.Schulz—*Asteraceae*

✓	Organ analyzed	Achene
✓	Origin of the sample	Senegal

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	3.6 (method AFNOR/NFT 60-205, 1976; extr. <i>n</i> -hexane)	Miralles and Pares (1980)
Oil in the dried achene	15.5	Miralles and Pares (1980)

Blighia sapida K.D.Koenig—*Sapindaceae*

✓ Common names	Akee, akee apple (Eng.); akée, aki (Fr.)
✓ Organs analyzed	Aril, seed
✓ Origins of the samples	Benin, Ivory coast, Nigeria

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.1 (method in another paper; extr. ethoxyethane)	Ucciani et al. (1964)
	0.6 (method AOCS, 1975)	Essien et al. (1989)
	2.4 (IUPAC, 1987)	Djenontin et al. (2009)
Unsaponifiable matter in the aril oil	0.9 (method in another paper; extr. ethoxyethane)	Ucciani et al. (1964)
Oil in the dried seed	17.0	Ucciani et al. (1964)
	25.9	Essien et al. (1989)
	21.6	Djenontin et al. (2009)
Oil in the dried aril	72.5	Ucciani et al. (1964)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)	
Unsaponifiable fractions	Essien et al. (1989)	Djenontin et al. (2009)
Sterols (stigmasterol is dominant)		143 (GC)
Tocopherols (α - and γ -tocopherol are dominant)		34 (HPLC)
β -carotene	<0.1 (OCLC-Spectro)	

Boehmeria japonica (L.f.) Miq.—*Urticaceae*

✓ Synonym	<i>Boehmeria longispica</i> Steud.
✓ Organ analyzed	Seed
✓ Origin of the sample	Japan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	3.2 (method not indicated)	Kato and Tanaka (1981)
Oil in the dried seed	12.1	Kato and Tanaka (1981)

Boehmeria nivea (L.) Gaudich.—*Urticaceae*

✓ Common names	Ramie (Eng.); ramie de Chine (Fr.)
✓ Organ analyzed	Seed
✓ Origin of the sample	Japan

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	3.6 (method not indicated)	Kato and Tanaka (1981)
Oil in the dried seed	17.5	Kato and Tanaka (1981)

Boehmeria spicata Thunb.—*Urticaceae*

✓ Organ analyzed	Seed
✓ Origin of the sample	Japon

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	3.9 (method not indicated)	Kato and Tanaka (1981)
Oil in the dried seed	10.6	Kato and Tanaka (1981)

Bombax ceiba L.—*Bombacaceae*

✓ Synonym	<i>Gossampinus malabarica</i> DC.Merr.
✓ Common names	Indian kapok, red silk cotton tree (Eng.); fromager, kapok rouge (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Vietnam, oil from a company (Itoh et al. 1973)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.0 (method DGF/C-III, 1953) 0.5 ^a (method described; extr. 2-isopropoxypropane)	Franzke et al. (1971) Itoh et al. (1973)
Oil in the dried seed	22.4	Franzke et al. (1971)

^aFrom a deodorized oil

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Itoh et al. (1973) ^a
Sterols	285 (TLC)
4-Methylsterols	25 (TLC)
Triterpene alcohols	95 (TLC)
Hydrocarbons and other nonpolar compounds	95 (TLC)

^aFrom a deodorized oil*Borago officinalis* L.—*Boraginaceae*

✓ Common names	Borage (Eng.); bourrache (Fr.)
✓ Organ analyzed	Achene
✓ Origins of the samples	Spain, oils from companies (Ntsourankoua and Artaud 1997; Hammond 1998; Phillips et al. 2002)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the achene oil	1.2–1.9 (method AFNOR/NFT 60-205, 1981; extr. <i>n</i> -hexane) 0.7 (method AFNOR/NFT 60-205, 1981; extr. ethoxyethane)	Ucciani et al. (1992) Ntsourankoua and Artaud (1997)
Oil in the dried achene	34.0–35.1	Ucciani et al. (1992)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)		
	Ntsourankoua and Artaud (1997)	Hammond (1998)	Phillips et al. (2002)
Unsaponifiable fractions			
Sterols			287–292 (GC)
Triterpene alcohols (cycloartenol is dominant)	98 (HPLC)		
Tocopherols (δ-tocopherol is dominant)		141 (HPLC)	
Tocotrienols		– (HPLC)	

Borago pygmaea (DC.) Chater & Greuter—*Boraginaceae*

✓ Common names	Slender borage (Eng.); bourrache naine (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	France

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.9–1.0 (method AFNOR/NFT 60-205, 1981; extr. <i>n</i> -hexane)	Ucciani et al. (1992)
Oil in the dried seed	20.7–21.4	Ucciani et al. (1992)

Brassica cretica Lam.—*Brassicaceae*

✓ Synonym	<i>Brassica oleracea</i> var. <i>botrytis</i> L.
✓ Common names	Cauliflower (Eng.); chou-fleur, brocoli (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Vietnam, doubtful; variety not specified (Matthäus et al. 2003)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1–1.5 (method not indicated)	Mensier (1957)
Oil in the dried seed	30–35	Mensier (1957)
	38.0	Matthäus et al. (2003)

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)
Unsaponifiable fractions	Matthäus et al. (2003)
Tocopherols (γ -tocopherol is dominant)	38 (HPLC)
Tocotrienols	traces (CLHP)
Plastochromanol-8	6 (HPLC)

Brassica juncea (L.) Czern. ssp. *juncea*—*Brassicaceae*

✓ Common names	Brown mustard, Indian mustard (Eng.); moutarde brune, moutarde orientale (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	China, Vietnam, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.8 (method AOCS, 1975)	Ali and McKay (1982)
	1.4 (method described; extr. ethoxyethane)	Li et al. (2000)
	≤1.5 ^a (method ISO/3596:2000 or AOCS/ Ca 6b-53; extr. ethoxyethane or ISO/ 18609:2000; extr. <i>n</i> -hexane)	Codex Alimentarius (2009)
Oil in the dried seed	39.2	Ali and McKay (1982)
	37.2	Li et al. (2000)
	34.8	Matthäus et al. (2003)

^aStandard for “Rapeseed oil” (turnip rape oil, colza oil, ravison oil, sarson oil, toria oil) produced from seeds of *Brassica napus* L., *Brassica rapa* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)		
	Li et al. (2000)	Codex Alimentarius (2009) ^a	Matthäus et al. (2003)
Unsaponifiable fractions			
Sterols (β-sitosterol is dominant)	895 (HPLC)	450–1,130 (GC)	
4-Methylsterols	39 (HPLC)		
Triterpene alcohols	63 (HPLC)		
Tocopherols (γ-tocopherol is dominant)		43–268 (HPLC)	48 (HPLC)
Tocotrienols		– (HPLC)	<1 (HPLC)
Plastochromanol-8			5 (HPLC)
Hydrocarbons	273 (HPLC)		

^aContents for “Rapeseed oil” (turnip rape oil, colza oil, ravison oil, sarson oil, toria oil) produced from seeds of *Brassica napus* L., *Brassica rapa* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species

<i>Brassica napus</i> L. ssp. <i>napus</i> — <i>Brassicaceae</i>	
✓ Common names	Canola, rape (Eng.); colza (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Canada, Korea, Italy, Germany, Pakistan, USA, doubtful, oils from companies (Itoh et al. 1973; Ali et al. 2009; Kornfeldt and Croon 1981; Phillips et al. 2002; Verleyen et al. 2002; Gruszka and Kruk 2007; Tuberoso et al. 2007), no details (Kundu and Deb 1981).

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.8 (method described; extr. ethoxyethane)	Fedeli et al. (1966)
	0.9 (method described; extr. 2-isopropoxypropane)	Itoh et al. (1973)
	1.7 (method AOCS/Ca 6a-40, 2nd edn.; extr. petroleum ether)	Kundu and Deb (1981)
	0.5–1.1 (method AOCS/Ca 6a-40, 1997; extr. petroleum ether)	Ali et al. (2009)
	≤2.0 ^a (method ISO/3596:2000 or AOCS/Ca 6b-53; extr. ethoxyethane or ISO/18609:2000; extr. <i>n</i> -hexane)	Codex Alimentarius (2009)
Oil in the dried seed	34.3–39.3	Ali et al. (2009)

^aStandard for “Rapeseed oil” (turnip rape oil, colza oil, ravison oil, sarson oil, toria oil) produced from seeds of *Brassica napus* L., *Brassica rapa* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species

Brassica nigra* (L.) K.Koch—*Brassicaceae

✓ Common names	Black mustard (Eng.); moutarde noire (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Algeria, China, Denmark, Ethiopia, India, USA, doubtful

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	≤1.5 (method ISO/3596:2000 or AOCS/Ca 6b-53; extr. ethoxyethane or ISO/18609:2000; extr. <i>n</i> -hexane)	Codex Alimentarius (2009)
Oil in the dried seed	13–38	Ucciani (1995)

Brassica rapa* L. (and its subspecies)—*Brassicaceae

✓ Common names	Turnip rape, field mustard (Eng.); navettes (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	Nepal, Pakistan, doubtful, oil from a company (Codex Alimentarius 2009)

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	0.8–0.9 (method AOCS, 1975) ≤2.0 ^a (method ISO/3596:2000 or AOCS/Ca 6b-53; extr. ethoxyethane or ISO/18609:2000; extr. <i>n</i> -hexane)	Ali and McKay (1982) Codex Alimentarius (2009)
Oil in the dried seed	38.5–46.8	Ali and McKay (1982)

^aStandard for “Rapeseed oil” (turnip rape oil, colza oil, ravison oil, sarson oil, toria oil) produced from seeds of *Brassica napus* L., *Brassica rapa* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species

Contents of unsaponifiable fractions in seed oil

	Contents (mg/100 g of oil)	
Unsaponifiable fractions	Codex Alimentarius (2009) ^a	Phillips et al. (2002)
Sterols (β-sitosterol is dominant)	450–1,130 (GC)	713–803 (GC)
Tocopherols (γ-tocopherol is dominant)	43–268 (HPLC)	
Tocotrienols	– (HPLC)	

^aContents for “Rapeseed oil” (turnip rape oil, colza oil, ravison oil, sarson oil, toria oil) produced from seeds of *Brassica napus* L., *Brassica rapa* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species

Brochoneura acuminata* (Lam.) Warb.—*Myristicaceae

✓ Synonym	<i>Brochoneura freneeii</i> Heckel
✓ Common name	Mafotra (Malagasy)
✓ Organ analyzed	Seed
✓ Origins of the samples	Madagascar

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	6.0 (imprecise method, referring to a book and a paper with different methods) 3.1 (method Ph. Fr. 10/V.3.4.7, 1983; extr. ethoxyethane)	Bianchini et al. (1981) Unpublished personal work
Oil in the dried seed	64.5 57.8	Bianchini et al. (1981) Unpublished personal work

Brunfelsia americana L.—*Solanaceae*

✓ Common name	Lady of the night (Eng.)
✓ Organ analyzed	Seed
✓ Origin of the sample	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.2 (method AOCS, 1973)	Daulatabad and Hosamani (1991)
Oil in the dried seed	30.0	Daulatabad and Hosamani (1991)

Buchanania cochinchinensis (Lour.) M.R.Almeida.—*Anacardiaceae*

✓ Synonym	<i>Buchanania lanzan</i> Spreng.
✓ Common names	Chirauli nut (Eng.); almondette (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of the samples	India

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.7 (method not indicated) 1.9 (method not indicated)	Sengupta and Roychoudhury (1977) Banerjee and Jain (1988)
Oil in the dried kernel	50 33.5	Sengupta and Roychoudhury (1977) Banerjee and Jain (1988)

Bulbinella spp.—*Xanthorrhoeaceae*

(Six species analyzed)

✓ Organ analyzed	Seed
✓ Origins of samples	New Zealand

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	1.2–12.3 (method Cocks, 1933; extr. ethoxyethane)	Morice (1969)
Oil in the dried seed	13.9–37.4	Morice (1969)

Butea monosperma (Lam.) Taub.—*Fabaceae*

✓ Common names	Flame of the forest, Bengal kino (Eng.)
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Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	≈ 3 (method AOAC, 1965; extr. ethoxyethane)	Gunakunru et al. (2004)
Oil in the dried seed	26.7	Gunakunru et al. (2004)

Butia capitata (Mart.) Becc.—*Arecaceae*

✓ Synonym	<i>Butia capitata</i> var. <i>pulposa</i> (Barb. Rodr.) Becc.
✓ Common names	Jelly palm (Eng.); palmier abricot (Fr.)
✓ Organ analyzed	Kernel
✓ Origins of samples	Uruguay

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the kernel oil	0.8 (method not indicated)	Grompone (1985)
Oil in the dried kernel	41.2–48.0	Grompone (1985)

Buxus sempervirens L.—*Buxaceae*

✓ Common names	Boxwood (Eng.); buis (Fr.)
✓ Organ analyzed	Seed
✓ Origins of the samples	France

Unsaponifiable matter and oil contents

Fat fractions and sources	Contents (g/100 g)	References
Unsaponifiable matter in the seed oil	2.1 (method AFNOR/NFT 60-205, 1981; extr. <i>n</i> -hexane)	Ferlay et al. (1993)
Oil in the dried seed	25.2	Ferlay et al. (1993)
	42	Radunz and Schmid (2000)

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