

Aldehyde

1 Aliphatische und araliphatische Aldehyde

Methanal	H-CHO	<i>Formaldehyd</i>	F.-92°C, Kp.-21°C
Ethanal	CH ₃ -CHO	<i>Acetaldehyd</i>	F.-123°C, Kp.21°C, D.0,780
Propanal	CH ₃ -CH ₂ -CHO	<i>Propionaldehyd</i>	F.-81°C, Kp.49°C, D.0,800
Butanal	CH ₃ -(CH ₂) ₂ -CHO	<i>n-Butyraldehyd</i>	F.-97°C, Kp.74,7°C, D.0,803
Pentanal	CH ₃ -(CH ₂) ₃ -CHO	<i>n-Valeraldehyd</i>	F.-91°C, Kp.104°C, D.0,818
Hexanal	CH ₃ -(CH ₂) ₄ -CHO	<i>Capronaldehyd</i>	F.-56°C, Kp.130°C, D.0,814
Heptanal	CH ₃ -(CH ₂) ₅ -CHO	<i>Oenanthaldehyd</i>	F.-43°C, Kp.153°C, D.0,821
Octanal	CH ₃ -(CH ₂) ₆ -CHO	<i>Caprylaldehyd</i>	F.-13°C, Kp.168°C, D.0,823
Nonanal	CH ₃ -(CH ₂) ₇ -CHO	<i>Pelargonaldehyd</i>	D.0,825
Decanal	CH ₃ -(CH ₂) ₈ -CHO	<i>Caprinaldehyd</i>	Kp.208°C, D.0,828
Undecanal	CH ₃ -(CH ₂) ₉ -CHO		D.0,825
Dodecanal	CH ₃ -(CH ₂) ₁₀ -CHO	<i>Laurinaldehyd</i>	F.12°C, Kp.238°C, D.0,831
Tridecanal	CH ₃ -(CH ₂) ₁₁ -CHO		D.0,835
Tetradecanal	CH ₃ -(CH ₂) ₁₂ -CHO	<i>Myristinaldehyd</i>	F.23,5°C
Pentadecanal	CH ₃ -(CH ₂) ₁₃ -CHO		
Hexadecanal	CH ₃ -(CH ₂) ₁₄ -CHO		
Heptadecanal	CH ₃ -(CH ₂) ₁₅ -CHO		
Octadecanal	CH ₃ -(CH ₂) ₁₆ -CHO		
Nonadecanal	CH ₃ -(CH ₂) ₁₇ -CHO		
Eicosanal	CH ₃ -(CH ₂) ₁₈ -CHO		

	H-[O-CH ₂]-OH	<i>Paraformaldehyd</i>	
Polyoxymethylen	HO-[CH ₂ -O]-CH ₂ -O	(Kettenabbruch durch Kation) <i>Polyformaldehyd</i>	

Ethandial	OHC-CHO	<i>Glyoxal</i>	
Propandial	OHC-CH ₂ -CHO	<i>Malonaldehyd</i>	
Butandial	OHC-(CH ₂) ₂ -CHO	<i>Succinaldehyd</i>	
Pentandial	OHC-(CH ₂) ₃ -CHO	<i>Glutaraldehyd</i>	
Hexandial	OHC-(CH ₂) ₄ -CHO		
Heptandial	OHC-(CH ₂) ₅ -CHO		
Octandial	OHC-(CH ₂) ₆ -CHO		
Nonandial	OHC-(CH ₂) ₇ -CHO		
Decandial	OHC-(CH ₂) ₈ -CHO		

Verzweigte Alkanale

Verzweigte Aldehyde

2-Methylpropanal	CH ₃ -CH(CH ₃)-CHO	<i>iso-Butyraldehyd</i>	F.-65°C, Kp.62°C, D.0,789, LW.100
2,2-Dimethylpropanal	CH ₃ -C(CH ₃) ₂ -CHO	<i>Pivalaldehyd</i>	
2-Methylbutanal	CH ₃ -CH ₂ -CH(CH ₃)-CHO	<i>2-Methylbutyraldehyd</i>	F.93°C, D.0,807
3-Methylbutanal	CH ₃ -CH(CH ₃)-CH ₂ -CHO	<i>iso-Valeraldehyd</i>	F.-51°C, Kp.92°C, D.0,798
2-Ethylbutanal	CH ₃ -CH ₂ -CH(CH ₃ -CH ₂)-CHO	<i>2-Ethylbutyraldehyd</i>	F.-89°C, Kp.116°C, D.0,815
2-Methylpentanal	CH ₃ -(CH ₂) ₂ -CH(CH ₃)-CHO	<i>2-Methylvaleraldehyd</i>	F.-100°C, Kp.118°C, D.0,810

Halogenalkanale

Halogenierte Aldehyde

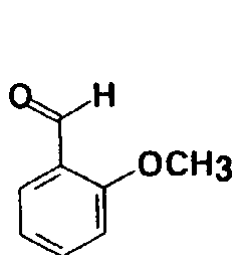
Chlorethanal	CH ₂ Cl-CHO	<i>Chloracetaldehyd</i>	
Tribromethanal	CBr ₃ -CHO	<i>Tribromacetaldehyd, Bromal</i>	Kp.174°C, D.2,665
Trichlorethanal	CCl ₃ -CHO	<i>Trichloracetaldehyd, Chloral</i>	Kp.98°C

2 alpha, beta-ungesättigte Aldehyde

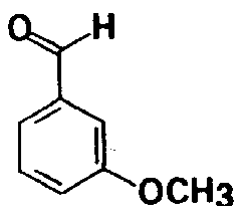
Propenal	$\text{CH}_2=\text{CH}-\text{CHO}$	<i>Acrolein</i>	F.-88°C, Kp.52°C, D.0,839
But-2-enal (Z)-	$\text{CH}_3-\text{CH}=\text{CH}-\text{CHO}$	<i>iso-Crotonaldehyd</i>	cis:
(E)-		<i>Crotonaldehyd</i>	trans: F.-74°C, Kp.102°C, D.0,852
But-3-enal	$\text{CH}_2=\text{CH}-\text{CH}_2-\text{CHO}$		
Pent-2-enal	$\text{CH}_3-\text{CH}_2-\text{CH}=\text{CH}-\text{CHO}$		trans: D.0,860
Hex-2-enal	$\text{CH}_3-(\text{CH}_2)_2-\text{CH}=\text{CH}-\text{CHO}$	<i>Blätteraldehyd</i>	trans: D.0,846
Hept-2-enal	$\text{CH}_3-(\text{CH}_2)_3-\text{CH}=\text{CH}-\text{CHO}$		trans: D.0,857
Oct-2-enal	$\text{CH}_3-(\text{CH}_2)_4-\text{CH}=\text{CH}-\text{CHO}$		trans: D.0,846
Non-2-enal	$\text{CH}_3-(\text{CH}_2)_5-\text{CH}=\text{CH}-\text{CHO}$	<i>3-Hexylacrolein</i>	trans: D.0,846
Dec-2-enal	$\text{CH}_3-(\text{CH}_2)_6-\text{CH}=\text{CH}-\text{CHO}$		cis: D.0,857
Dec-4-enal	$\text{CH}_3-(\text{CH}_2)_4-\text{CH}=\text{CH}-(\text{CH}_2)_2-\text{CHO}$		trans: D.0,842
Hexa-2,4-dienal	$\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{CH}-\text{CHO}$	<i>Sorbinaldehyd</i>	D.0,871
Prop-2-inal	$\text{CH}\equiv\text{C}-\text{CHO}$	<i>Propargylaldehyd</i>	Kp.69°C
But-2-inal	$\text{CH}_3-\text{C}\equiv\text{C}-\text{CHO}$	<i>Tetrolaldehyd</i>	F.-26°C, Kp.107°C, D.0,926
3,7-Dimethylocta-2,6-dienal	$\text{CH}_3-\text{C}(\text{CH}_3)=\text{CH}-(\text{CH}_2)_2-\text{C}(\text{CH}_3)=\text{CH}-\text{CHO}$	<i>Citral</i>	

3 Aromatische Aldehyde

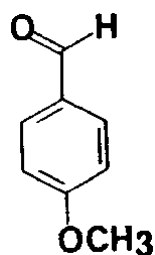
3.1 Aromatische Aldehyde mit Hydroxyl- oder Ethergruppen



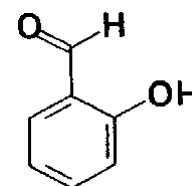
2-Methoxybenzaldehyd
o-Anisaldehyd
F.36°C, Kp.236°C



3-Methoxybenzaldehyd
m-Anisaldehyd
D.1,117

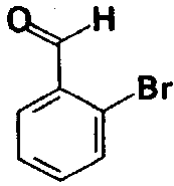


4-Methoxybenzaldehyd
p-Anisaldehyd
F.1°C, Kp.248°C, D.1,122, L.W.3,3

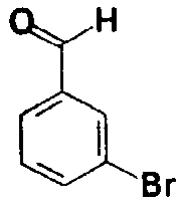


2-Hydroxybenzaldehyd
Salicylaldehyd
F.1°C, Kp.197°C, D.1,146, L.W.14

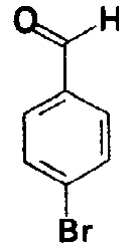
3.2 Halogenhaltige aromatische Aldehyde



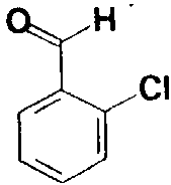
2-Brombenzaldehyd
F. -21°C, Kp. 230°C, D. 1,600



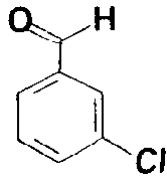
3-Brombenzaldehyd
Kp. 235°C, D. 1,577



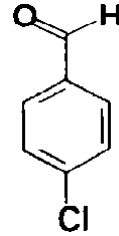
4-Brombenzaldehyd
F. 57°C



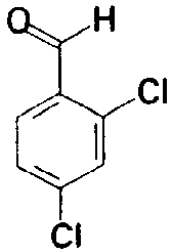
2-Chlorbenzaldehyd
F. 10°C, D. 1,249



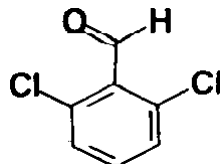
3-Chlorbenzaldehyd
F. 17°C, Kp. 214°C, D. 1,234



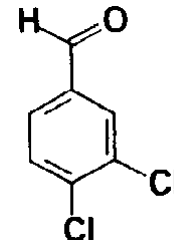
4-Chlorbenzaldehyd
F. 45°C, Kp. 214°C



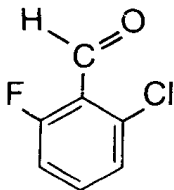
2,4-Dichlorbenzaldehyd
F. 68°C



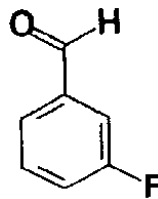
2,6-Dichlorbenzaldehyd
F. 68°C



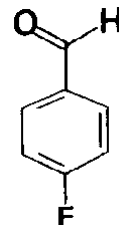
3,4-Dichlorbenzaldehyd
F. 38°C, Kp. 248°C



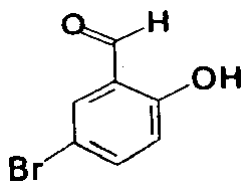
2-Chlor-6-fluor-benzaldehyd
F. 37°C



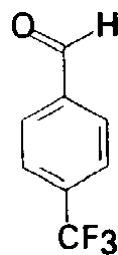
3-Fluorbenzaldehyd
D. 1,180



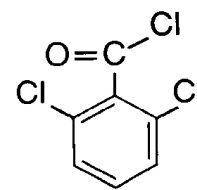
4-Fluorbenzaldehyd
F. -10°C, Kp. 183°C, D. 1,177



5-Brom-2-hydroxybenzaldehyd
5-Bromsalicylaldehyd
F. 102°C

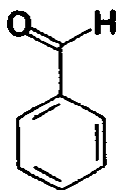


4-Trifluormethylbenzaldehyd
D. 1,297

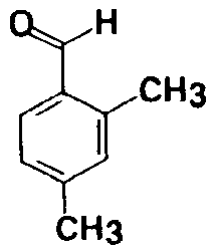


2,6-Dichlorbenzoylchlorid
F. 16°C, Kp. 250°C, D. 1,44

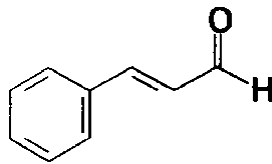
3.3 Andere aromatische Aldehyde



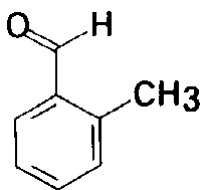
Phenylmethanal
Benzaldehyd
F.-26°C, Kp.179°C
D.1,045



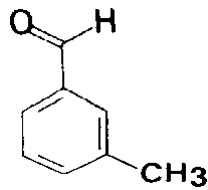
2,4-Dimethylbenzaldehyd
F.-9°C, Kp.215°C, D.1,017



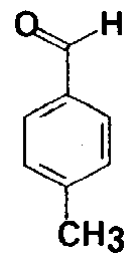
trans-3-Phenyl-prop-2-enal
Zimtaldehyd
F.-7°C, Kp.252°C, D.1,051



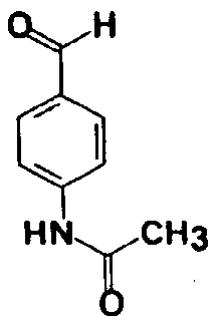
2-Methylbenzaldehyd
Kp.200°C, D.1,033



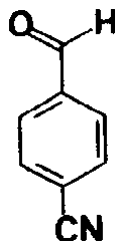
3-Methylbenzaldehyd
Kp.200°C, D.1,024



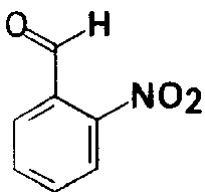
4-Methylbenzaldehyd
F.-6°C, Kp.204°C, D.1,017



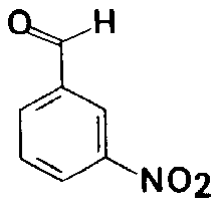
4-Acetamidobenzaldehyd
Kp.153°C



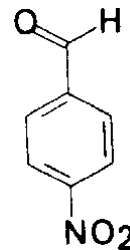
4-Cyanobenzaldehyd
F.102°C



2-Nitrobenzaldehyd
F.42°C

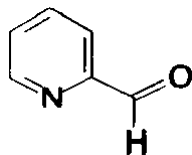


3-Nitrobenzaldehyd
F.55°C

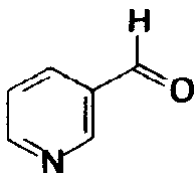


4-Nitrobenzaldehyd
F.102°C

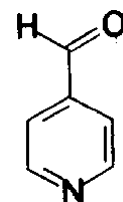
4 Heterocyclische Aldehyde



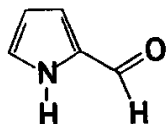
Pyridin-2-carbaldehyd
Picolinaldehyd
F.-21°C, Kp.181°C, D.1,121



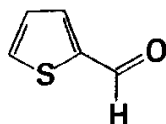
Pyridin-3-carbaldehyd
Nicotinaldehyd
Z.50°C, D.~1,14



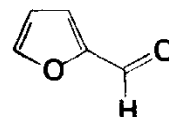
Pyridin-4-carbaldehyd
Isonicotinaldehyd
F.-4°C, Z.50°C, D.1,138



Pyrrol-2-carbaldehyd
2-Formylpyrrol
F.45°C



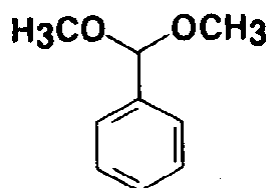
Thiophen-2-carbaldehyd
2-Formylthiophen
Kp.195°C, D.1,222



Furan-2-carbaldehyd
Furfural
F.-37°C, Kp.162°C, D.1,159, LW.83

5 Acetale

Dimethoxymethan $\text{CH}_3\text{-O-CH}_2\text{-O-CH}_3$ *Formaldehyddimethylacetal* F.-105°C, Kp.43°C, D.0,859
1,1-Dimethoxyethan $\text{CH}_3\text{-O-CH(CH}_3\text{)-O-CH}_3$ *Acetaldehyddimethylacetal* Kp.64°C, D.0,852
1,1-Diethoxyethan $\text{CH}_3\text{-CH}_2\text{-O-CH(CH}_3\text{)-O-CH}_2\text{-CH}_3$ *Acetaldehyddiäthylacetal* F.-100°C, Kp.102°C, D.0,829



Dimethoxytoluen
Benzaldehyddimethylacetal
D.1,016