



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

ATTN: SAFETY DIRECTOR
SCHOOLCRAFT COLLEGE
ATTN JOEL WATKINS
18600 HAGGERTY ROAD
LIVONIA MI 48152

EMERGENCY PHONE 1-414-273-3850
PO BOX 355 MILWAUKEE, WI 52301
DATE 08/13/96
CUST#: 938609
PO#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 1

SECTION 1. - - - - - CHEMICAL IDENTIFICATION - - - - -

CATALOG #: C5-3
NAME: CAFFEINE, 99%

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 58-08-2
MF: C8H10N4O2
EC NO: 200-362-1

SYNONYMS

ANHYDROUS CAFFEINE * CAFFEIN * CAFFEINA (ITALIAN) * COFFEIN (GERMAN) *
COFFEINE * COFFEINUM * 3,7-DIHYDRO-1,3,7-TRIMETHYL-1H-PURINE-2,6-
DIONE * ELDIATRIC C * GUARANINE * KOFÉIN (CZECH) * KOFFEIN (GERMAN) *
METHYLTHEOBROMIDE * NCI-C02733 * NO-DOZ * ORGANEX * 1H-PURINE-2,6-
DIONE, 3,7-DIHYDRO-1,3,7-TRIMETHYL- * THEIN * THEINE * THEOBROMINE, 1-
METHYL- * THEOPHYLLINE, 7-METHYL * 1,3,7-TRIMETHYL-2,6-DIOXOPURINE *
1,3,7-TRIMETHYLXANTHINE * XANTHINE, 1,3,7-TRIMETHYL *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

TOXIC
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
POSSIBLE RISK OF HARM TO THE UNBORN CHILD.
POSSIBLE MUTAGEN.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
HEART
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.
DO NOT BREATHE DUST.

SECTION 4. - - - - - FIRST-AID MEASURES - - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL[®]
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.

CONTINUED ON NEXT PAGE

Holland
Aldrich Chemie
Telefoon: 3238991301
Fax: 3238991311

Spain
Aldrich Química
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemie
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizkova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Safdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg, Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj.53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

CUST#: 938609
PO#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 2

CATALOG #: C5-3
NAME: CAFFEINE, 99%

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA
CARBON DIOXIDE.
DRY CHEMICAL POWDER.
WATER SPRAY.

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES - - - - -

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - HANDLING AND STORAGE - - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
USE ONLY IN A CHEMICAL FUME HOOD.
SAFETY SHOWER AND EYE BATH.
DO NOT BREATHE DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
TOXIC.
POSSIBLE TERATOGEN.
POSSIBLE MUTAGEN.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR

CONTINUED ON NEXT PAGE

Holland
Aldrich Chemie
Tele: 3238991301
Fax: 3238991311

Spain
Aldrich Química
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemicals
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizikova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Safdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj.53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

CUST#: 938609
PG#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 3

CATALOG #:
NAME:

C5-3
CAFFEINE, 99%

WHITE POWDER

PHYSICAL PROPERTIES

MELTING POINT: 234 C TO 236.5 C

SECTION 10. ----- STABILITY AND REACTIVITY -----

INCOMPATIBILITIES

STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE,
AND NITROGEN OXIDES.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE EFFECTS

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
MAY CAUSE IRRITATION.

CHRONIC EFFECTS

OVEREXPOSURE MAY CAUSE REPRODUCTIVE DISORDER(S) BASED ON TESTS WITH
LABORATORY ANIMALS.

LABORATORY EXPERIMENTS HAVE SHOWN MUTAGENIC EFFECTS.

TARGET ORGAN(S):

CENTRAL NERVOUS SYSTEM
HEART

RTECS #: EV6475000

CAFFEINE

TOXICITY DATA

ORL-HMN LDLO:192 MG/KG
ORL-CHD LDLO:320 MG/KG
ORL-WMN LDLO:1 GM/KG
IVN-WMN LDLO:57 MG/KG
ORL-RAT LD50:192 MG/KG
IPR-RAT LD50:240 MG/KG
SCU-RAT LD50:170 MG/KG
IVN-RAT LD50:105 MG/KG
REC-RAT LD50:300 MG/KG
ORL-MUS LD50:127 MG/KG
IPR-MUS LD50:168 MG/KG
SCU-MUS LD50:242 MG/KG
IVN-MUS LD50:62 MG/KG
UNR-MUS LD50:251 MG/KG
ORL-DOG LD50:140 MG/KG

JNDRAK 5,252,65
FNCSA6 3,275,74
BIATDR 1,6,73
APTOA6 15,331,59
JNDRAK 5,252,65
ZERNAL 15,64,76
JCPHB8 7,131,67
JPETAB 82,89,44
JCPHB8 7,131,67
TXAPA9 44,1,78
CPBTAL 22,1459,74
ARZNAD 6,601,56
TOLED5 29,25,85
NYKZAU 53,25,57
NIIRDN 6,174,82

CONTINUED ON NEXT PAGE

Holland
Aldrich Chemie
Telephone: 3238991301
Fax: 3238991311

Spain
Aldrich Quimica
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemie
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizkova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Safdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj 53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

CUST#: 938609
PO#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 4

CATALOG #:
NAME:

C5-3
CAFFEINE, 99%

SCU-DOG LD50:100 MG/KG
ORL-RBT LD50:224 MG/KG
IVN-RBT LD50:58 MG/KG
ORL-GPG LD50:230 MG/KG
ORL-HAM LD50:230 MG/KG
ORL-BWD LD50:316 MG/KG

NIIRDN 6,174,82
TXAPA9 44,1,78
KSRNAM 13,791,79
TXAPA9 2,23,60
TXAPA9 44,1,78
AECTCV 12,355,83

TARGET ORGAN DATA

BRAIN AND COVERINGS (OTHER DEGENERATIVE CHANGES)
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (HALLUCINATIONS, DISTORTED PERCEPTIONS)
BEHAVIORAL (TOXIC PSYCHOSIS)
BEHAVIORAL (TREMOR)
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)
BEHAVIORAL (CHANGE IN MOTOR ACTIVITY)
BEHAVIORAL (ATAXIA)
BEHAVIORAL (STIFFNESS)
BEHAVIORAL (MUSCLE CONTRACTION OR SPASTICITY)
BEHAVIORAL (WITHDRAWAL)
BEHAVIORAL (AGGRESSION)
CARDIAC (CHANGE IN RATE)
CARDIAC (OTHER CHANGES)
VASCULAR (BP ELEVATION NOT CHARACTERIZED IN AUTONOMIC SECTION)
LUNGS, THORAX OR RESPIRATION (ACUTE PULMONARY EDEMA)
LUNGS, THORAX OR RESPIRATION (DYSPPNEA)
LUNGS, THORAX OR RESPIRATION (CYANOSIS)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)
GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA)
GASTROINTESTINAL (NAUSEA OR VOMITING)
KIDNEY, URETER, BLADDER (CHANGES IN TUBULES)
KIDNEY, URETER, BLADDER (INTERSTITIAL NEPHRITIS)
KIDNEY, URETER, BLADDER (URINE VOLUME INCREASED)
KIDNEY, URETER, BLADDER (STRUCTURAL OR FUNCTIONAL CHANGE IN URETER)
MUSCULO-SKELETAL (TUMORS)
EFFECTS ON FERTILITY (FEMALE FERTILITY INDEX)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON FERTILITY (LITTER SIZE)
EFFECTS ON FERTILITY (ABORTION)
EFFECTS ON EMBRYO OR FETUS (EXTRA EMBRYONIC STRUCTURES)
EFFECTS ON EMBRYO OR FETUS (MATERNAL-FETAL EXCHANGE)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
EFFECTS ON EMBRYO OR FETUS (FETAL DEATH)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CENTRAL NERVOUS SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (EYE, EAR)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (SKIN AND SKIN APPENDAGES)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)

CONTINUED ON NEXT PAGE

Holland
Aldrich Chemie
Telefax: 3238991301
Fax: 3238991311

Spain
Aldrich Química
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemie
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizkova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Safdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg, Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj.53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

CUST#: 938609
PO#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 5

CATALOG #:
NAME:

C5-3
CAFFEINE, 99%

SPECIFIC DEVELOPMENTAL ABNORMALITIES (BLOOD AND LYMPHATIC SYSTEMS)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (GASTROINTESTINAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (UROGENITAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (HOMEOSTASIS)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (OTHER DEVELOPMENTAL ABNORMALITIES)
EFFECTS ON NEWBORN (VIABILITY INDEX)
EFFECTS ON NEWBORN (WEANING OR LACTATION INDEX)
EFFECTS ON NEWBORN (GROWTH STATISTICS)
EFFECTS ON NEWBORN (BIOCHEMICAL AND METABOLIC)
EFFECTS ON NEWBORN (BEHAVIORAL)
EFFECTS ON NEWBORN (PHYSICAL)
EFFECTS ON NEWBORN (OTHER POSTNATAL MEASURES OR EFFECTS)
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
COMPLETE INFORMATION.

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -

CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - REGULATORY INFORMATION - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 613-086-00-5

TOXIC

R 22

HARMFUL IF SWALLOWED.

REVIEWS, STANDARDS, AND REGULATIONS

DEL=MAK

IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 51,291,91

IARC CANCER REVIEW:ANIMAL INADEQUATE EVIDENCE IMEMDT 51,291,91

IARC CANCER REVIEW:GROUP 3 IMEMDT 51,291,91

DEL-RUSSIA:STEL 0.5 MG/M3 JAN93

NOHS 1974: HZD M1132; NIS 6; TNF 893; NOS 7; TNE 5715

NOES 1983: HZD M1132; NIS 19; TNF 1707; NOS 23; TNE 19593; TFE 11199

CONTINUED ON NEXT PAGE

Holland
Aldrich Chemie
Tele: 3238991301
Fax: 3238991311

Spain
Aldrich Quimica
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemie
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizikova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Salfdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj.53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

CUST#: 938609
PO#: B15436

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 6

CATALOG #: C5-3
NAME: CAFFEINE, 99%

NOES 1983: HZD X9210; NIS 2; TNF 38; NOS 5; TNE 373; TFE 92
EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-SA7/SHE; IN VITRO
CYTOGENETICS-NONHUMAN
EPA GENETOX PROGRAM 1988, POSITIVE: D MELANOGASTER-WHOLE SEX CHROM.
LOSS
EPA GENETOX PROGRAM 1988, POSITIVE: D MELANOGASTER-NONDISJUNCTION; N
CRASSA-ANEUPLOIDY
EPA GENETOX PROGRAM 1988, POSITIVE: E COLI POLA WITHOUT S9; IN VITRO
SCE-HUMAN
EPA GENETOX PROGRAM 1988, POSITIVE: D MELANOGASTER SEX-LINKED LETHAL; S
CEREVISIAE-ANEUPLOIDY
EPA GENETOX PROGRAM 1988, POSITIVE/DOSE RESPONSE: IN VITRO
CYTOGENETICS-HUMAN LYMPHOCYTE
EPA GENETOX PROGRAM 1988, NEGATIVE: SHE-CLONAL ASSAY; RODENT DOMINANT
LETHAL
EPA GENETOX PROGRAM 1988, NEGATIVE: HISTIDINE REVERSION-AMES TEST; IN
VITRO SCE-NONHUMAN
EPA GENETOX PROGRAM 1988, NEGATIVE: MOUSE SPECIFIC LOCUS; SPERM
MORPHOLOGY-MOUSE
EPA GENETOX PROGRAM 1988, NEGATIVE: UDS IN MOUSE GERM CELLS; V79 CELL
CULTURE-GENE MUTATION
EPA GENETOX PROGRAM 1988, NEGATIVE: TRP REVERSION
EPA GENETOX PROGRAM 1988, NEGATIVE/LIMITED: CARCINOGENICITY-MOUSE/RAT
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: IN VIVO CYTOGENETICS-NONHUMAN
BONE MARROW
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: CYTOGENETICS-MALE GERM CELL
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: RODENT HERITABLE TRANSLOCATION;
MAMMALIAN MICRONUCLEUS
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: MOUSE SPOT TEST; B SUBTILIS REC
ASSAY
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: IN VITRO SCE-HUMAN LYMPHOCYTES;
IN VIVO SCE-NONHUMAN
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, APRIL 1996

SECTION 16. - - - - - OTHER INFORMATION - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE
HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH
THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR
ADDITIONAL TERMS AND CONDITIONS OF SALE.

COPYRIGHT 1996 ALDRICH CHEMICAL CO., INC.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

Holland
Aldrich
Telephone: 3238991301
Fax: 3238991311

Spain
Aldrich Química
Apt. de Correos, 161
28100 Alcobendas, Madrid
Telephone: 3416619977
Fax: 3416619642

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 39233417340
Fax: 39238010737

Switzerland
Aldrich Chemie
Industriestrasse 25
CH-9470 Buchs
Telephone: 41817552723
Fax: 41817567420

Belgium
Aldrich Chemie
K. Cardijnplein 8
B-2880 Bornem
Telephone: 3238991301
Fax: 3238991311

Czech Republic
Aldrich, s.r.o.
Krizkova, 27
180 00 Prague-8
Telephone: 42224225285
Fax: 42224224031

India
Aldrich-India
B4/158 Safdarjung Enclave
New Delhi 110 029
Telephone: 91116886872
Fax: 91116886873

France
Aldrich-Chimie S.a.r.l.
L'Isle D'Abeau Chesnes
B.P. 701
38297 St. Quentin Fallavier
Cedex
Telephone: 3374822800
Fax: 3374956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 81332580155
Fax: 81332580157

Australia
Aldrich Chemicals
Unit 2
10 Anella Ave.
Castle Hill, NSW 2154
Telephone: 6128999977
Fax: 6128999742

United Kingdom
Aldrich Chemical Co. Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 44747822211
Fax: 44747823779

Brazil
Aldrich-Brazil
Rua Sabara, 566-conj.53
01239-010 Sao Paulo, SP
Telephone: 55112311866
Fax: 55112579079

Germany
Aldrich-Chemie GmbH & Co.KG
Riedstrasse 2, D-89555 Steinheim
Telephone: 497329970
Fax: 4973291939