



**DEPARTMENT OF JUSTICE**

**Drug Enforcement Administration**

**[Docket No. DEA-392]**

**Bulk Manufacturer of Controlled Substances Application: Cayman Chemical  
Company**

**ACTION:** Notice of application.

**DATES:** Registered bulk manufacturers of the affected basic classes, and applicants therefore, may file written comments on or objections to the issuance of the proposed registration on or before [INSERT 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESS:** Written comments should be sent to: Drug Enforcement Administration,  
Attention: DEA Federal Register Representative/DRW, 8701 Morrisette Drive, Springfield,  
Virginia 22152.

**SUPPLEMENTARY INFORMATION:** In accordance with 21 CFR 1301.33(a), this is notice that on July 25, 2018, Cayman Chemical Company, 1180 East Ellsworth Road, Ann Arbor, Michigan 48108 applied to be registered as a bulk manufacturer of the following basic classes of controlled substances:

| <b>Controlled Substance</b>                      | <b>Drug Code</b> | <b>Schedule</b> |
|--------------------------------------------------|------------------|-----------------|
| 3-Fluoro-N-methylcathinone (3-FMC)               | 1233             | I               |
| Cathinone                                        | 1235             | I               |
| Methcathinone                                    | 1237             | I               |
| 4-Fluoro-N-methylcathinone (4-FMC)               | 1238             | I               |
| Pentedrone ( $\alpha$ -methylaminovalerophenone) | 1246             | I               |
| Mephedrone (4-Methyl-N-methylcathinone)          | 1248             | I               |
| 4-Methyl-N-ethylcathinone (4-MEC)                | 1249             | I               |

| <b>Controlled Substance</b>                                                                                | <b>Drug Code</b> | <b>Schedule</b> |
|------------------------------------------------------------------------------------------------------------|------------------|-----------------|
| Naphyrone                                                                                                  | 1258             | I               |
| N-Ethylamphetamine                                                                                         | 1475             | I               |
| N,N-Dimethylamphetamine                                                                                    | 1480             | I               |
| Fenethylamine                                                                                              | 1503             | I               |
| Aminorex                                                                                                   | 1585             | I               |
| 4-Methylaminorex (cis isomer)                                                                              | 1590             | I               |
| Gamma Hydroxybutyric Acid                                                                                  | 2010             | I               |
| Methaqualone                                                                                               | 2565             | I               |
| Mecloqualone                                                                                               | 2572             | I               |
| JWH-250 (1-Pentyl-3-(2-methoxyphenylacetyl) indole)                                                        | 6250             | I               |
| SR-18 (Also known as RCS-8) (1-Cyclohexylethyl-3-(2-methoxyphenylacetyl) indole)                           | 7008             | I               |
| ADB-FUBINACA (n-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide)       | 7010             | I               |
| 5-Fluoro-UR-144 and XLR11 [1-(5-Fluoro-pentyl)1H-indol-3-yl](2,2,3,3-tetramethylcyclopropyl)methanone      | 7011             | I               |
| AB-FUBINACA (N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide)            | 7012             | I               |
| JWH-019 (1-Hexyl-3-(1-naphthoyl)indole)                                                                    | 7019             | I               |
| MDMB-FUBINACA (Methyl 2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate)              | 7020             | I               |
| 2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3-methylbutanoate                                         | 7021             | I               |
| AB-PINACA (N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide)                        | 7023             | I               |
| THJ-2201 [1-(5-fluoropentyl)-1H-indazol-3-yl](naphthalen-1-yl)methanone                                    | 7024             | I               |
| AB-CHMINACA (N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide)          | 7031             | I               |
| MAB-CHMINACA (N-(1-amino-3,3dimethyl-1-oxobutan-2-yl)-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide)      | 7032             | I               |
| 5F-AMB (Methyl 2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3-methylbutanoate)                         | 7033             | I               |
| 5F-ADB; 5F-MDMB-PINACA (Methyl 2-(1-(5fluoropentyl)-1H-indazole-3-carboxamido)-3,3dimethylbutanoate)       | 7034             | I               |
| ADB-PINACA (N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide)                   | 7035             | I               |
| MDMB-CHMICA, MMB-CHMINACA (Methyl 2-(1-(cyclohexylmethyl)-1H-indole-3-carboxamido)-3,3-dimethylbutanoate)- | 7042             | I               |

| <b>Controlled Substance</b>                                                           | <b>Drug Code</b> | <b>Schedule</b> |
|---------------------------------------------------------------------------------------|------------------|-----------------|
| APINACA and AKB48 N-(1-Adamantyl)-1-pentyl-1H-indazole-3-carboxamide                  | 7048             | I               |
| 5F-APINACA, 5F-AKB48 (N-(adamantan-1-yl)-1-(5fluoropentyl)-1H-indazole-3-carboxamide) | 7049             | I               |
| JWH-081 (1-Pentyl-3-(1-(4-methoxynaphthoyl) indole)                                   | 7081             | I               |
| SR-19 (Also known as RCS-4) (1-Pentyl-3-[(4-methoxy)-benzoyl] indole)                 | 7104             | I               |
| JWH-018 (also known as AM678) (1-Pentyl-3-(1-naphthoyl)indole)                        | 7118             | I               |
| JWH-122 (1-Pentyl-3-(4-methyl-1-naphthoyl) indole)                                    | 7122             | I               |
| UR-144 (1-Pentyl-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone              | 7144             | I               |
| JWH-073 (1-Butyl-3-(1-naphthoyl)indole)                                               | 7173             | I               |
| JWH-200 (1-[2-(4-Morpholinyl)ethyl]-3-(1-naphthoyl)indole)                            | 7200             | I               |
| AM2201 (1-(5-Fluoropentyl)-3-(1-naphthoyl) indole)                                    | 7201             | I               |
| JWH-203 (1-Pentyl-3-(2-chlorophenylacetyl) indole)                                    | 7203             | I               |
| PB-22 (Quinolin-8-yl 1-pentyl-1H-indole-3-carboxylate)                                | 7222             | I               |
| 5F-PB-22 (Quinolin-8-yl 1-(5-fluoropentyl)-1H-indole-3-carboxylate)                   | 7225             | I               |
| Alpha-ethyltryptamine                                                                 | 7249             | I               |
| Ibogaine                                                                              | 7260             | I               |
| CP-47,497 (5-(1,1-Dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl-phenol])             | 7297             | I               |
| CP-47,497 C8 Homologue (5-(1,1-Dimethyloctyl)-2-[(1R,3S)-3-hydroxycyclohexyl-phenol]) | 7298             | I               |
| Lysergic acid diethylamide                                                            | 7315             | I               |
| 2,5-Dimethoxy-4-(n)-propylthiophenethylamine (2C-T-7)                                 | 7348             | I               |
| Marihuana                                                                             | 7360             | I               |
| Tetrahydrocannabinols                                                                 | 7370             | I               |
| Mescaline                                                                             | 7381             | I               |
| 2-(4-Ethylthio-2,5-dimethoxyphenyl) ethanamine (2C-T-2 )                              | 7385             | I               |
| 3,4,5-Trimethoxyamphetamine                                                           | 7390             | I               |
| 4-Bromo-2,5-dimethoxyamphetamine                                                      | 7391             | I               |
| 4-Bromo-2,5-dimethoxyphenethylamine                                                   | 7392             | I               |
| 4-Methyl-2,5-dimethoxyamphetamine                                                     | 7395             | I               |
| 2,5-Dimethoxyamphetamine                                                              | 7396             | I               |
| JWH-398 (1-Pentyl-3-(4-chloro-1-naphthoyl) indole)                                    | 7398             | I               |
| 2,5-Dimethoxy-4-ethylamphetamine                                                      | 7399             | I               |
| 3,4-Methylenedioxyamphetamine                                                         | 7400             | I               |
| 5-Methoxy-3,4-methylenedioxyamphetamine                                               | 7401             | I               |
| N-Hydroxy-3,4-methylenedioxyamphetamine                                               | 7402             | I               |

| <b>Controlled Substance</b>                                                 | <b>Drug Code</b> | <b>Schedule</b> |
|-----------------------------------------------------------------------------|------------------|-----------------|
| 3,4-Methylenedioxy-N-ethylamphetamine                                       | 7404             | I               |
| 3,4-Methylenedioxymethamphetamine                                           | 7405             | I               |
| 4-Methoxyamphetamine                                                        | 7411             | I               |
| 5-Methoxy-N,N-dimethyltryptamine                                            | 7431             | I               |
| Alpha-methyltryptamine                                                      | 7432             | I               |
| Diethyltryptamine                                                           | 7434             | I               |
| Dimethyltryptamine                                                          | 7435             | I               |
| Psilocybin                                                                  | 7437             | I               |
| Psilocyn                                                                    | 7438             | I               |
| 5-Methoxy-N,N-diisopropyltryptamine                                         | 7439             | I               |
| N-Ethyl-1-phenylcyclohexylamine                                             | 7455             | I               |
| 1-(1-Phenylcyclohexyl)pyrrolidine                                           | 7458             | I               |
| 1-[1-(2-Thienyl)cyclohexyl]piperidine                                       | 7470             | I               |
| 1-[1-(2-Thienyl)cyclohexyl]pyrrolidine                                      | 7473             | I               |
| N-Benzylpiperazine                                                          | 7493             | I               |
| 2-(2,5-Dimethoxy-4-methylphenyl) ethanamine (2C-D)                          | 7508             | I               |
| 2-(2,5-Dimethoxy-4-ethylphenyl) ethanamine (2C-E )                          | 7509             | I               |
| 2-(2,5-Dimethoxyphenyl) ethanamine (2C-H)                                   | 7517             | I               |
| 2-(4-iodo-2,5-dimethoxyphenyl) ethanamine (2C-I)                            | 7518             | I               |
| 2-(4-Chloro-2,5-dimethoxyphenyl) ethanamine (2C-C)                          | 7519             | I               |
| 2-(2,5-Dimethoxy-4-nitro-phenyl) ethanamine (2C-N)                          | 7521             | I               |
| 2-(2,5-Dimethoxy-4-(n)-propylphenyl) ethanamine (2C-P)                      | 7524             | I               |
| 2-(4-Isopropylthio)-2,5-dimethoxyphenyl) ethanamine (2C-T-4 )               | 7532             | I               |
| MDPV (3,4-Methylenedioxypropylvalerone)                                     | 7535             | I               |
| 2-(4-bromo-2,5-dimethoxyphenyl)-N-(2-methoxybenzyl) ethanamine (25B-NBOMe)  | 7536             | I               |
| 2-(4-chloro-2,5-dimethoxyphenyl)-N-(2-methoxybenzyl) ethanamine (25C-NBOMe) | 7537             | I               |
| 2-(4-iodo-2,5-dimethoxyphenyl)-N-(2-methoxybenzyl) ethanamine (25I-NBOMe)   | 7538             | I               |
| Methylone (3,4-Methylenedioxy-N-methylcathinone)                            | 7540             | I               |
| Butylone                                                                    | 7541             | I               |
| Pentylone                                                                   | 7542             | I               |
| alpha-pyrrolidinopentiophenone ( $\alpha$ -PVP)                             | 7545             | I               |
| alpha-pyrrolidinobutiophenone ( $\alpha$ -PBP)                              | 7546             | I               |
| AM-694 (1-(5-Fluoropentyl)-3-(2-iodobenzoyl) indole)                        | 7694             | I               |
| Acetyldihydrocodeine                                                        | 9051             | I               |
| Benzylmorphine                                                              | 9052             | I               |
| Codeine-N-oxide                                                             | 9053             | I               |

| <b>Controlled Substance</b>                                                                 | <b>Drug Code</b> | <b>Schedule</b> |
|---------------------------------------------------------------------------------------------|------------------|-----------------|
| Desomorphine                                                                                | 9055             | I               |
| Etorphine (except HCl)                                                                      | 9056             | I               |
| Codeine methylbromide                                                                       | 9070             | I               |
| Dihydromorphine                                                                             | 9145             | I               |
| Heroin                                                                                      | 9200             | I               |
| Morphine-N-oxide                                                                            | 9307             | I               |
| Normorphine                                                                                 | 9313             | I               |
| U-47700 (3,4-dichloro-N-[2-(dimethylamino)cyclohexyl]-N-methylbenzamide)                    | 9547             | I               |
| MT-45 (1-cyclohexyl-4-(1,2-diphenylethyl)piperazine))                                       | 9560             | I               |
| Tilidine                                                                                    | 9750             | I               |
| Acryl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylacrylamide)                           | 9811             | I               |
| Para-Fluorofentanyl                                                                         | 9812             | I               |
| 3-Methylfentanyl                                                                            | 9813             | I               |
| Alpha-methylfentanyl                                                                        | 9814             | I               |
| Acetyl-alpha-methylfentanyl                                                                 | 9815             | I               |
| N-(2-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)propionamide                                | 9816             | I               |
| Acetyl Fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylacetamide)                           | 9821             | I               |
| Butyryl Fentanyl                                                                            | 9822             | I               |
| Para-fluorobutyryl fentanyl                                                                 | 9823             | I               |
| 4-Fluoroisobutyryl fentanyl (N-(4-fluorophenyl)-N-(1-phenethylpiperidin-4-yl)isobutyramide) | 9824             | I               |
| 2-methoxy-N-(1-phenethylpiperidin-4-yl)-N-phenylacetamide                                   | 9825             | I               |
| Para-chloroisobutyryl fentanyl                                                              | 9826             | I               |
| Isobutyryl fentanyl                                                                         | 9827             | I               |
| Beta-hydroxyfentanyl                                                                        | 9830             | I               |
| Beta-hydroxy-3-methylfentanyl                                                               | 9831             | I               |
| Alpha-methylthiofentanyl                                                                    | 9832             | I               |
| 3-Methylthiofentanyl                                                                        | 9833             | I               |
| Furanyl fentanyl (N-(1-phenethylpiperidin-4-yl)-N-phenylfuran-2-carboxamide)                | 9834             | I               |
| Thiofentanyl                                                                                | 9835             | I               |
| Beta-hydroxythiofentanyl                                                                    | 9836             | I               |
| Para-methoxybutyryl fentanyl                                                                | 9837             | I               |
| Ocfentanil                                                                                  | 9838             | I               |
| Valeryl fentanyl                                                                            | 9840             | I               |
| N-(1-phenethylpiperidin-4-yl)-N-phenyltetrahydrofuran-2-carboxamide                         | 9843             | I               |

| <b>Controlled Substance</b>                                | <b>Drug Code</b> | <b>Schedule</b> |
|------------------------------------------------------------|------------------|-----------------|
| Cyclopropyl Fentanyl                                       | 9845             | I               |
| Cyclopentyl fentanyl                                       | 9847             | I               |
| Fentanyl related-compounds as defined in 21 CFR 1308.11(h) | 9850             | I               |
| Amphetamine                                                | 1100             | II              |
| Methamphetamine                                            | 1105             | II              |
| Lisdexamfetamine                                           | 1205             | II              |
| Phenmetrazine                                              | 1631             | II              |
| Methylphenidate                                            | 1724             | II              |
| Amobarbital                                                | 2125             | II              |
| Pentobarbital                                              | 2270             | II              |
| Secobarbital                                               | 2315             | II              |
| Phencyclidine                                              | 7471             | II              |
| 4-Anilino-N-phenethyl-4-piperidine (ANPP)                  | 8333             | II              |
| Phenylacetone                                              | 8501             | II              |
| 1-Piperidinocyclohexanecarbonitrile                        | 8603             | II              |
| Cocaine                                                    | 9041             | II              |
| Codeine                                                    | 9050             | II              |
| Etorphine HCl                                              | 9059             | II              |
| Dihydrocodeine                                             | 9120             | II              |
| Oxycodone                                                  | 9143             | II              |
| Hydromorphone                                              | 9150             | II              |
| Ecgonine                                                   | 9180             | II              |
| Ethylmorphine                                              | 9190             | II              |
| Hydrocodone                                                | 9193             | II              |
| Levomethorphan                                             | 9210             | II              |
| Levorphanol                                                | 9220             | II              |
| Isomethadone                                               | 9226             | II              |
| Meperidine                                                 | 9230             | II              |
| Meperidine intermediate-B                                  | 9233             | II              |
| Methadone                                                  | 9250             | II              |
| Dextropropoxyphene, bulk (non-dosage forms)                | 9273             | II              |
| Morphine                                                   | 9300             | II              |
| Thebaine                                                   | 9333             | II              |
| Oxymorphone                                                | 9652             | II              |
| Thiafentanil                                               | 9729             | II              |
| Alfentanil                                                 | 9737             | II              |
| Remifentanil                                               | 9739             | II              |

| <b>Controlled Substance</b> | <b>Drug Code</b> | <b>Schedule</b> |
|-----------------------------|------------------|-----------------|
| Sufentanil                  | 9740             | II              |
| Carfentanil                 | 9743             | II              |
| Tapentadol                  | 9780             | II              |
| Fentanyl                    | 9801             | II              |

The company plans to bulk manufacture the listed controlled substances to produce forensic and research of analytical reference standards for distribution to its customers. In reference to marihuana (7360) and tetrahydrocannabinols (7370) the company will manufacture as synthetics only. No other activities for these drug codes are authorized for this registration.

Dated: August 9, 2019.

Neil D. Doherty,  
*Acting Assistant Administrator.*  
 [FR Doc. 2019-18322 Filed: 8/23/2019 8:45 am; Publication Date: 8/26/2019]