

CAS FORMULUS®

**BETWEEN
DISCOVERY
AND DELIVERY
THERE IS
INSPIRATION**

Your formulations partner
is CAS Formulus



Formulation science is a critical component of development

Formulation science is a make-or-break step that often determines whether a product will make it to market. While this step is essential, it can take as much as 60% of lab time and is often labor intensive and costly.

10 years and \$3-5B

Average development time and cost of a new drug in pharma^{1,2}

2-7 years

Average development time of a product line extension in specialty chemicals³



CAS Formulus is the only formulation solution that simplifies the development process

For more than 100 years, CAS solutions have provided the tools and expertise that formulation scientists rely on. This hindsight, insight, and foresight inspire everyday breakthroughs and life-changing science.

CAS has been monitoring the market and building a better solution for more than three years, addressing common obstacles, such as:

Disparate Data Sources

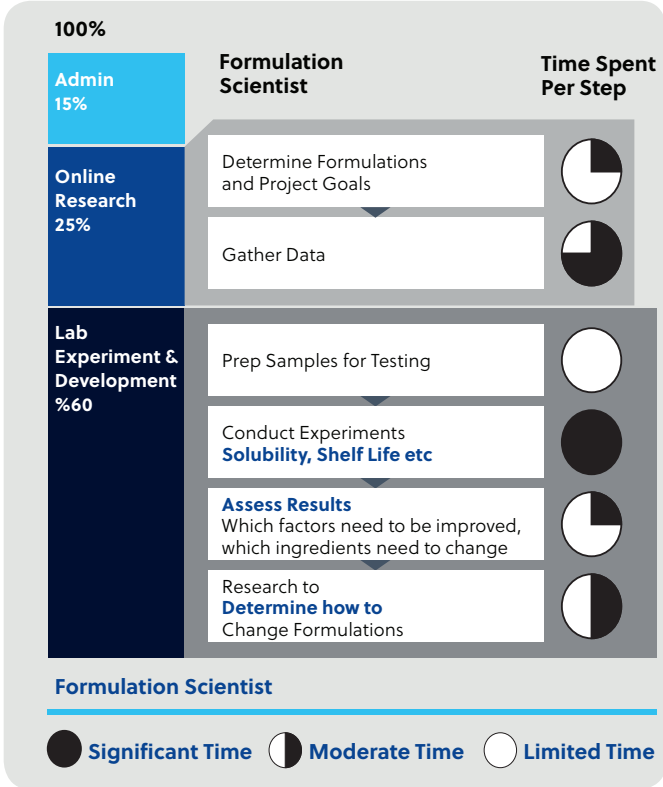
Spend time searching online, other formulation tools, and supplier websites

Insufficient Content

Only utilize small data libraries and formulations are not indexed

Unscalable Requirements

Significant amount of reading is required to find information in patents and journals



“89% of surveyed organizations said they began realizing ROI with CAS Formulus in less than three months”

*TechValidate survey of Formulus users



CAS Formulus provides better data before you enter the lab

Formulation scientists need to quickly gain knowledge and insights from existing formulations. CAS Formulus was designed for ease of use by searching formulations in an intuitive display. The interface provides the ability to view formulation details, explore layer ingredients grouped together, and understand the effectiveness of formulations.

CAS Formulus is a comprehensive formulations database and workflow solution that enables development of products with maximum efficiency.

Fast

>70% of formulation scientists agree that CAS Formulus allows them to narrow their focus more quickly and get up-to-speed on new products.

Efficient

CAS Formulus brings together information from multiple sources into a single solution that increases formulator efficiency and effectiveness.

Comprehensive

CAS Formulus brings the formulations found in journal articles, patents, and product inserts directly into your search result for reliable evaluation.

"I hope a searching tool can be more specific...I get too many results when I search."

Formulation chemist describing available search tools



Leaders across R&D organizations rely on CAS

PHARMA


48 of the
TOP
pharma companies¹

ACADEMIC

100 of the
TOP 100
universities²

GOVERNMENT

10 of the
TOP 10
global patent offices³

BIOTECH

25 of the
TOP 25
biotech companies⁴

CHEMICAL

44 of the
TOP
chemical companies⁵

CAS Formulus is a solution within the CAS SciFinder Discovery Platform, an enterprise solution created to help get discoveries to market faster and optimize profitability. CAS SciFinder Discovery Platform provides researchers with the information they need to avoid surprises and make smart investments with insight into the latest discoveries and competitive intelligence.

Formulation discovery

Other solutions do not offer the capability to search across data sources and significant amount of time (25%) is spent trying to piece together the components to achieve an expected outcome. CAS Formulus was designed for ease of use by searching formulations in an intuitive display. The interface provides the ability to view formulation details, explore layer ingredients grouped together, and understand the effectiveness of the formulation.

CAS Formulus Formulations - montelukast sodium chewable tablet

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Formulations

Formulations Suggested References

Filter by

- Industry
 - Agrochemical
 - Cosmetic
 - Pharmaceutical
- Document Type
 - Patent (14)
 - Journal (130)
 - Drug Product Inert (84)
 - General Review (288)
 - Preprint (1)
- Purpose
 - Hair dyes (105K)
 - Drugs (514)
 - Cosmetics and Personal care products (44K)
 - Antidote agents (32K)
 - Detergents (21K)

Sort: Relevance

Montelukast Sodium Chewable Tablets: Antiasthmatics

Location: example 3
Purpose: antiasthmatics
Target: allergic rhinitis symptoms, aspirin-sensitive asthmatics, exercise-induced bronchoconstriction, long-term asthma
Delivery Route: oral drug delivery systems
Physical Form: pharmaceutical chewable tablets

Component	Function	Amount Reported	Patent
Cyclopropanecarboxylic acid, 1-[[[1-(6-1-[3-(1,6,2-7-chloro-2-quinolinyl)ethoxy]phenyl)-3-(2-(1-hydroxy-1-methylethyl)phenyl)propyl]amino]methyl]-, sodium salt (1:1)	active agent	4.16 g	Montelukast sodium chewable tablet and preparation method thereof Assignee: Shanghai Anshun Lab. Co., Ltd. Classification: Chinese Language: Chinese View Reference Detail
Sodium carboxymethyl cellulose	disintegrant	8 g	Patent PDF
Hydroxypropyl cellulose	-	4 g	
Iron oxide (Fe ₂ O ₃)	colorant	0.5 g	

Additional components reported
View Formulation Detail

17 Similar Formulations - View All (opens in a new window)

Montelukast Sodium Chewable Tablet: Antiasthmatics

Location: article page 1, 2, 3
Purpose: antiasthmatics
Delivery Route: oral drug delivery systems
Physical Form: tablet

Component	Function	Amount Reported	Journal
Cyclopropanecarboxylic acid, 1-[[[1-(6-1-[3-(1,6,2-7-chloro-2-quinolinyl)ethoxy]phenyl)-3-(2-(1-hydroxy-1-methylethyl)phenyl)propyl]amino]methyl]-, sodium salt (1:1)	antiasthmatics	5.19 mg	Formulation development and evaluation of Montelukast sodium chewable tablets Journal of Chemical and Pharmaceutical Sciences Language: English View Reference Detail
Croscarmellose sodium	-	9.00 mg	
Mannitol	excipient	199.31 mg	
Hydroxypropyl cellulose	texturing agents	75.00 mg	

Additional components reported
View Formulation Detail

Montelukast Sodium Chewable Tablet: Leukotriene Receptor Antagonist

Location: example 2, table 4, 5, 6, 10
Purpose: leukotriene receptor antagonist

CAS Formulus Formulations -

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Formulation Detail (1 of 218,114)

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Montelukast Sodium Chewable Tablets: Antiasthmatics

Location: example 3
Purpose: antiasthmatics
Target: allergic rhinitis symptoms, aspirin-sensitive asthmatics, exercise-induced bronchoconstriction, long-term asthma
Delivery Route: oral drug delivery systems
Physical Form: pharmaceutical chewable tablets

Component	Function	Amount Reported	Optionality
Cyclopropanecarboxylic acid, 1-[[[1-(6-1-[3-(1,6,2-7-chloro-2-quinolinyl)ethoxy]phenyl)-3-(2-(1-hydroxy-1-methylethyl)phenyl)propyl]amino]methyl]-, sodium salt (1:1)	active agent	4.16 g	Mandatory
Sodium carboxymethyl cellulose	disintegrant	8 g	Mandatory
Hydroxypropyl cellulose	-	4 g	Mandatory
Iron oxide (Fe ₂ O ₃)	colorant	0.5 g	Mandatory
Ethanol	solvent	50 g	Mandatory
[+]-Lactose	excipient	162.54 g	Mandatory
Cellulose	excipient	18 g	Mandatory
Flavoring materials	flavoring agent	0.8 g	Mandatory
Magnesium stearate	lubricant	2 g	Mandatory

Process

the preparation of montelukast sodium chewable tablets comprises: weighing 4 g of hydroxypropyl cellulose and dissolving into 30 g of ethanol, stirring uniformly to a solution and letting it stand for defoaming, then weighing 4.16 g of montelukast sodium into 20 g of the ethanol solution and stirring until it is dissolved, then mixing the montelukast sodium ethanol solution and hydroxypropyl cellulose ethanol solution and uniformly stirring, and adding iron oxide red which is a coloring agent, suspending uniformly to obtain a binder solution; then spraying the binder solution onto the surface of the pharmaceutical excipient mixture containing spray-dried lactose and microcrystalline cellulose in a fluidized bed to maintain a fluidized state, and granulating, and after drying, evenly mixing the particles with the other pharmaceutically acceptable excipients such as sodium carboxymethylcellulose(disintegrant), cherry flavor(flavoring agent) and magnesium stearate(lubricant), and finally tableting is carried out to obtain a montelukast sodium chewable tablet.

CAS Formulus Formulations - pyraclostrobin-epoxiconazole wettable powder

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Formulations

Formulations Suggested References

Filter by

- Industry
 - Agrochemical
 - Cosmetic
 - Pharmaceutical
- Document Type
 - Patent (897)
 - Journal (78)
 - Drug Product Inert (73)
 - General Review (65)
- Purpose
 - Drugs (49)
 - Cosmetics and Personal care products (29)
 - Hair dyes (28)
 - Drug delivery systems (24)
 - Antidote agents (22)

Sort: Relevance

Fungicidal Composition

Location: example 1
Purpose: fungicides

Component	Function	Amount Reported	Patent
epoxiconazole	-	25 g/ha	Fungicidal composition for controlling fungal infections in the soybean plant Assignee: FMC AG Classification: EP1222242 Language: English View Reference Detail
Carbonic acid,N-(2-[2,4,6-trichlorophenyl]-1-pyrrolo[2,1-b]imidazol-5-yl)methyl azain, methyl ester, methyl-[[[2-(2,4,6-trichlorophenyl)-2-fluorophenyl]-2-oxoethyl]amino]-1,1,1-trifluoroethane	-	66.5 g/ha	Patent PDF
Feopropimorph	-	150 g/ha	

View Formulation Detail

8,361 Similar Formulations - View All (opens in a new window)

Fungicidal Compositions: Agrochemical Fungicides

Location: claim 1, 2, 3, 8, 10
Purpose: agrochemical fungicides
Target: rice blast
Physical Form: wettable powder

Component	Function	Amount Reported	Patent
Group agrochemical fungicides	agrochemical fungicides	5-60 g/ha	Prothioflacon calcium and fungicide-containing composition Assignee: Zhejiang Zhongchen Chemical Co., Ltd. Classification: Chinese Language: Chinese View Reference Detail
Cyfluthrin	agrochemical fungicides	-	Patent PDF
Cyfluthrin	agrochemical fungicides	-	
Cyfluthrin	agrochemical fungicides	-	
Cyfluthrin	agrochemical fungicides	-	

CAS Formulus Formulations -

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Formulation Detail (3 of 199,287)

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82% Pyraclostrobin-Epoxiconazole Wettable Powder: Antimicrobial Agent

Location: example 19, table 4
Purpose: antimicrobial agent
Target: fungal diseases, leaf spot, leaf spot pathogens, plant pathogens
Physical Form: wettable powder

Component	Function	Amount Reported	Optionality
Group: pyraclostrobin-epoxiconazole mixture	active agent, fungicides	-	Mandatory
Epoxiconazole	fungicides	22.5 w %	Mandatory
Pyraclostrobin	fungicides	59.5 w %	Mandatory
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	inert filler	100 qs (w %)	Mandatory
Sodium lignosulfonate	dispersants	6 w %	Mandatory
Sodium dodecyl sulfate	wetting agents	4 w %	Mandatory

Process

82% pyraclostrobin-epoxiconazole wettable powder preparation: mixing evenly the active agent, dispersant, wetting agent and inert filler in the mixing tank; crushing by a jet mill and then uniformly mixing to obtain 82% pyraclostrobin-epoxiconazole wettable powder.

Experimental Activity

Descriptor	Notes	Details
disintegration	disintegration of the composition was evaluated.	24 s
foaming	foaming of the composition was evaluated.	2.5 ml



Efficient

Seeing through journal articles, patents, or product inserts can be extremely tedious. CAS Formulus brings together information from multiple sources including supplier, regulatory, and substance data in one solution to increase a formulation scientist's efficiency. In order to successfully develop a new formulation or update an existing one, it is necessary to understand the landscape.

Suppliers (52)
Results for Pyraclostrobin
CAS RN: 175013-18-0

SAGECHEM LIMITED
View Details
Product Information: Name: Pyraclostrobin
Quantity Information: Information not available from supplier
Ordering & Shipping: Order from Supplier \uparrow

Atomax Chemicals Co., Ltd.
View Details
Product Information: Name: Pyraclostrobin
Quantity Information: Information not available from supplier
Ordering & Shipping: Product information \uparrow

Haoyuan Chemexpress Co., Limited
View Details
Product Information: Name: Pyraclostrobin
Quantity Information: Information not available

Hangzhou Trylead Chemical Technology Co., Ltd.
View Details
Product Information: Name: methyl N-(2-[[1-(4-chlorophenyl)pyrazol-3-yl]oxymethyl]phenyl)-N-methoxyacetate
Quantity Information: Available Amounts: 1kg, 10kg, 25kg
Ordering & Shipping: Information not available

Aris Pharmaceuticals, Inc.
View Details
Product Information: Name: 2-[[1-(4-CHLOROPHENYL)-1H-PYRAZOL-3-YLOXYMETHYL]-N-HYDROXYBENZENAMINE
Quantity Information: Available Amounts: 1 g, 5 g, 25 g
Ordering & Shipping: Information not available

Amadis Chemical Co., Ltd.
View Details
Product Information: Name: Pyraclostrobin
Quantity Information: Information not available

Substance Detail
CAS RN: 175013-18-0
Pyraclostrobin
Key Physical Properties: Molecular Weight: 387.82
Chemical Structure: C19H19ClN3O4

Regulatory Information
Substance is on the following inventory lists:

Acronym	Inventory List	Country
IECSC	Inventory of Existing Chemical Substances in China	China
NZIoC	New Zealand Inventory of Chemicals	New Zealand
REACH	European Union regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals	European Union
SWISS	Inventory of Notified New Substances in Accordance with the Ordinance on Substances in Switzerland: Gilbide 1 (List of Toxic Substances 1)	Switzerland
TCSI	Taiwan Chemical Substance Inventory	Taiwan, Province of China

Harmonized Tariff Code: 293319
Other Names: [None listed]

Comprehensive

CAS Formulus bring the formulations found in journal articles, patents, and product inserts directly into your search result. The display groups together ingredients in an order to quickly understand the formulations science. The experimental activity is also incorporated in order to easily determine the effectiveness of the documented formulation.

Formulation Detail (2 of 218,114)

Montelukast Sodium Chewable Tablet: Antiasthmatics
Location: article page 1, 2, 3
Purpose: antiasthmatics
Delivery Route: oral drug delivery systems
Physical Form: tablet

Component	Function	Amount Reported	Optionality
Cyclopropaneacetic acid, 1-[[[1-[[1-(3-[[1-(2-(7-chloro-2-quinolinyl)ethyl]phenyl)-3-(2-(1-hydroxy-1-methylethyl)phenyl)propyl]thio)methyl]-sodium salt (1:1)	antiasthmatics	5.19 mg	Mandatory
Croscarmellose sodium	-	9.00 mg	Mandatory
Mannitol	excipient	199.31 mg	Mandatory
Hydroxypropyl cellulose	texturing agents	75.00 mg	Mandatory
Hydroxypropyl cellulose	coating materials	6.00 mg	Mandatory
Iron oxide (Fe ₂ O ₃)	coloring materials	0.60 mg	Mandatory
Aspartame	sweetening agents	1.50 mg	Mandatory
artificial cherry flavor	flavoring agents	0.40 mg	Mandatory
Magnesium stearate	lubricants	3.00 mg	Mandatory

Process

- Stage 1: sift montelukast sodium, hydroxypropyl cellulose and one fourth of cellulose, microcrystalline (PH 102) through mesh size 40 mesh.
- Stage 2: sift red ferric oxide through size 100 mesh and add to materials of step 1.
- Stage 3: Re-sift the materials of step 2 through size 40 mesh.
- Stage 4: sift remaining cellulose, microcrystalline (PH 102) through size 40 mesh and add to materials of step 3.
- Stage 5: Re-sift the materials of step 4 through size 40 mesh.
- Stage 6: sift mannitol, croscarmellose sodium, ferric oxide, aspartame, artificial cherry flavor through size 40 mesh.
- Stage 7: Re-sift the materials of step 6 through size 40 mesh.



CAS is a leader in scientific information solutions, partnering with innovators around the world to accelerate scientific breakthroughs. CAS employs over 1,400 experts who curate, connect, and analyze scientific knowledge to reveal unseen connections. For over 100 years, scientists, patent professionals, and business leaders have relied on CAS solutions and expertise to provide the hindsight, insight, and foresight they need so they can build upon the learnings of the past to discover a better future. CAS is a division of the American Chemical Society.

Connect with us at cas.org

References

1. https://cdn.sanity.io/files/0vv8moc6/pharmexec/339f103f01e043f652e39f8c0e72f3795fb71f60.pdf/PharmaceuticalExecutive_June2022_watermark.pdf 2. <https://www.shanghairanking.com/rankings/gras/2022/RS0103> 3. <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-943-2021-en-wipo-ip-facts-and-figures-2021.pdf> 4. <https://www.genengnews.com/a-lists/top-25-biotech-companies-of-2022/> 5. <https://cen.acs.org/business/finance/CENs-Global-Top-50-2022/100/i26>



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