FROST & SULLIVAN
BEST PRACTICES
AWARDS

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2020 | BEST PRACTICES AWARD

CLARIANT

2020 EUROPEAN SUSTAINABLE
ANTI-AGEING ACTIVE INGREDIENTS
NEW PRODUCT INNOVATION AWARD

Contents

Background and Company Performance

Industry Challenges

The global personal care industry has witnessed momentous growth, thus multiplying the demand for active ingredients. The increase in consumer spending and in beauty consciousness and self-image has contributed significantly to the demand for personal care products and active ingredients; however, strict regulatory procedures and shifting consumer preferences have impacted the active ingredients market growth.

Rising consumer demand for natural and clean-label ingredients is pressuring manufacturers to develop sustainable active ingredients; however, maintaining a price/performance balance while developing natural ingredients is a challenge. On the other hand, strict regulatory guidelines have resulted in a lower innovation index for active ingredients. For companies with a global presence, complying with regional regulatory guidelines is important, especially when launching novel ingredients. Stringent regulation procedures, however, restrict the innovation rate in the active ingredients industry. For instance, adding a new active ingredient to the existing list of ingredients is stringent and time consuming; however, a few companies have the capability and experience to overcome these industry challenges.

New Product Attributes and Customer Impact

Match to Needs

Founded in 1995 in Switzerland, Clariantis one of the leading specialty chemical companies. Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. On 31 December 2019, the company employed a total workforce of 17,223. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. Clariant is one of the leading participants in the global personal care ingredients industry and offers a wide range of active ingredients, such as moisturizers, preservatives, anti-aging, lightening, and emollients.

Clariant has always been characterized by its dedication to developing products that can bridge the demand-supply gap. With the launch of its Prenylium™ active ingredient, Clariant has established its prominence as a customer-oriented brand by targeting and matching customers' rising demand for natural anti-aging active ingredients. Prenylium is an extract of the *Morus alba* tree root, which has been used for centuries in traditional Chinese medicine. Launching an ingredient that uses traditional sources has allowed Clariant to create a position for itself in the personal care ingredients market, based on consumer awareness.

Prenylium is highly efficient and unique because it uses the Clariant Plant Milking Technology to extract the ingredient. In traditional *Morus alba* tree roots, prenylated flavonoids (the key molecule of the extract responsible for anti-oxidant and anti-aging properties) is present in lower amounts; however, the Plant Milking Technology stimulates the production of the total prenylated flavonoids (e.g., Kuwanon C by 1,000%, Moracenin A by 45,000%, Moracenin B by 2,000%) by 2,000% while allowing sustainable access to the root without destroying it.

The exceptional concentration of prenylated flavonoids in Prenylium results in the ingredient's stronger performance and efficacy; therefore, the combination of factors, such as sustainable ingredient sourcing and increased efficiency compared to traditional mulberry root extract, has positioned Clariant ahead of its competitors.

Design and Positioning

Clariant consistently focuses on developing highly functional yet natural and sustainable active ingredients. The company ensures that evolving consumer trends and potential opportunities remain the touchstone for its development of quality active ingredients. As a similar strategy, the Prenylium active ingredient was launched following the strategic partnership with Plant Advanced Technologies (PAT).

Clariant has acquired a leading position in the market by using the matrisome concept in its renowned product Prenylium to fight the signs of aging. Skin matrisome components, including glycoproteins, collagen, and proteoglycans, are perfectly functional in younger skin; however, an imbalance is noted in matrix components with age. Increased age and UVB exposure trigger the production of an AP-1 transcription factor in cells, consequently upregulating the expression of the CCN1 gene. The enhanced expression of the CCN1 gene signifies the increased production of enzymes, such as MMP1 (collagenase), causing collagen degradation and contributing to the signs of aging.

The company's Prenylium ingredient contains prenylated flavonoids at a higher concentration of 2,000%, whereby it can modulate the CCN1 expression and protect the skin matrisome from degrading. Furthermore, the ingredient is developed in a highly sustainable, traceable, and natural environment, thus meeting the consumer demand for environmentally friendly ingredients. The company's Plant Milking Technology that extracts Prenylium uses an aeroponic system and offers multiple advantages, such as no plant destruction during harvest, eco-friendly, and 100% traceability from seed to active ingredient.

Frost & Sullivan believes that through a proactive approach, Clariant has developed trend-oriented product lines, with Prenylium as a successful illustration. This active ingredient caters to the growing demand for anti-aging, natural, and sustainable products, allowing Clariant to stand out amidst tough competition.

Quality and Reliability

Based on Frost & Sullivan industry research, Clariant meets consumers' expectations in terms of quality, performance, and reliability, consequentially contributing to the company's leading position in the market.

To develop Prenylium, Clariant technology allows the growth of plant cultures in aeroponic conditions, thus ensuring lower greenhouse gas emissions, low water consumption, 100% traceability from seed to active ingredient, and reduced pollution. By using the aeroponics (soilless) medium for growing plant roots, the company ensures that the plant has access to better nutrients; however, for this, Clariant performs trials on a small-scale basis for a year to ensure that the growth of the selected plant is optimal in aeroponic conditions. In addition, Clariant understands that each plant has different requirements in terms of type

and quantity of nutrients. The company, therefore, conducts multiple trials to gauge the best set and quantity of nutrients that would allow higher plant and root growth and to increase the concentration of prenylated flavonoids. In addition, Clariant ensures that the Prenylium active ingredient meets quality expectations and regulatory standards, including Inventory of Existing Cosmetic Ingredients in China (IECIC), ROOT ORIGIN, ISO 16128, and Nagoya Protocol, thereby ensuring the product's global reach.

Frost & Sullivan believes that Prenylium's success will strengthen Clariant's product portfolio and position the company strongly in the market in terms of customer acquisition.

Customer Value Experience and Brand Equity

With a focus on exceptional quality and product efficacy, Clariant is one of the market-leading brands in the global personal care ingredient industry. The company develops best-in-class, innovative, and high-quality active ingredients that are fully aligned with consumers' requirements and demands.

As a brand, Clariant has always been known for its ability to strike a balance between its economic and performance value and its sustainability commitments, with Prenylium as a leading illustration. Prenylium successfully caters to the growing consumer demand for natural anti-aging ingredients, thereby improving the customer experience and in turn impacting Clariant's brand image. The company's claims have been further validated by in-tubo tests that demonstrate the role of Prenylium in protecting the skin matrisome component (collagen). In addition, test results demonstrate the superiority of Prenylium in inhibiting collagenase activity, compared to traditional root extracts that show no effect on the collagenase enzyme. Prenylium's unique prenylated flavonoids profile obtained using PAT's technology protects the skin matrisome from the collagenase enzyme, thus slowing down the signs of aging.

In addition, Clariant has demonstrated clinical data in an in-house study to prove the efficacy of Prenylium compared to a placebo product in mitigating the signs of aging. After eight weeks of applying the ingredient, the study analysis concluded that wrinkles were reduced by negative 16.6%, compared to the placebo, and skin plumping improved by 13.4%.

Clariant has developed an innovative ingredient that is inspired by nature and is unique in terms of its performance, concept, and technology, consequentially helping the company gain strong recognition as a competent and successful brand in the market. In addition, with the growing trend of social media, Clariant has increased its customer engagement through various publications that focus on its Plant Milking Technology. Moreover, Clariant has developed a premium root power label that is dedicated to a range of products based on its partnership with PAT, which in turn can help customers recognize and easily find the right product.

Frost & Sullivan believes that customized marketing and sales support and strong partnerships with retailers have helped Clariant enhance its image as a competent brand.
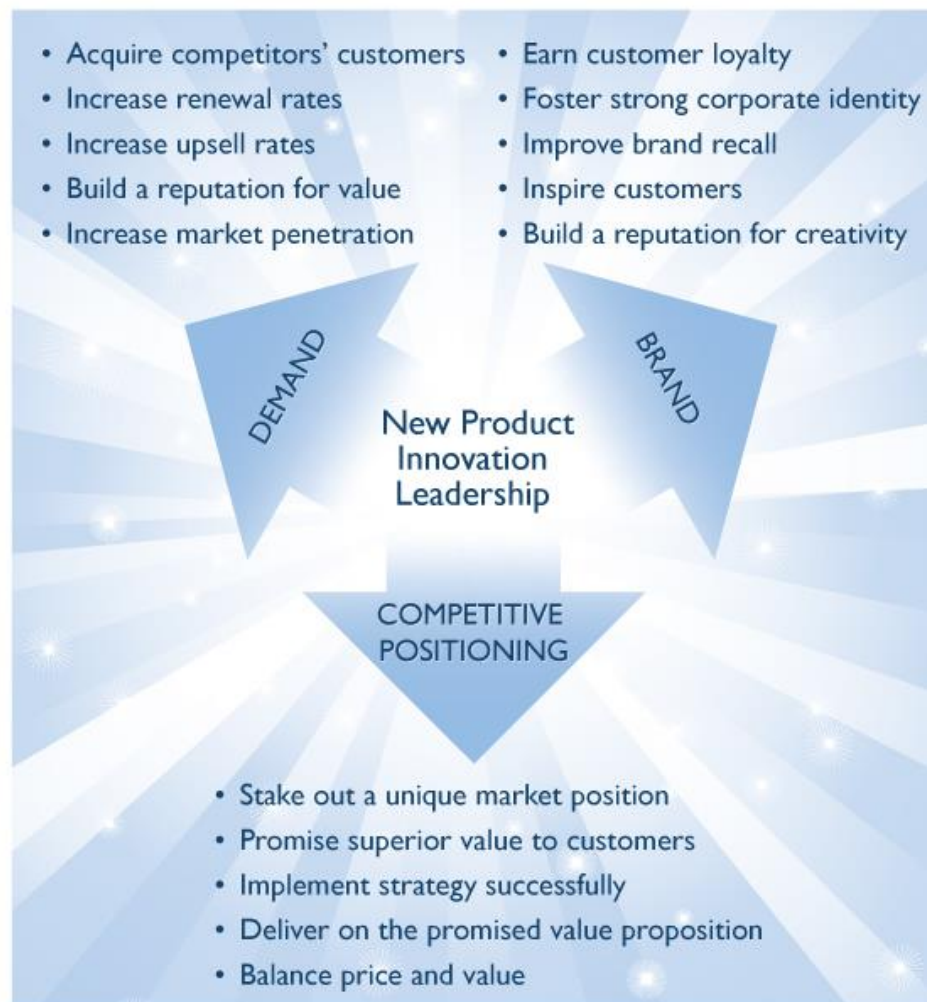
Conclusion

Even though the global personal care industry is witnessing significant growth, strict regulatory guidelines and changing consumer preferences have hampered the innovation growth of active ingredients.

With its innovation-driven portfolio, Clariant has overcome these industry challenges and has reinforced its position as a leading market participant. The company's breakthrough Prenylium ingredient has gained consumer interest as a powerful, sustainable, and anti-aging ingredient.

For its strong sustainable nature and overall performance, Clariant has earned Frost & Sullivan's 2020 New Product Innovation Award in the European sustainable anti-ageing active ingredients industry.

Significance of New Product Innovation

To receive the New Product Innovation Award (i.e., to be recognized as a leader not only in your industry, but among non-industry peers) requires a company to demonstrate excellence in growth, innovation, and leadership. This excellence typically translates into superior performance in three key areas (demand generation, brand development, and competitive positioning) that serve as the foundation of a company's future success and prepare it to deliver on the 2 factors that define the New Product Innovation Award: Visionary Innovation and Performance, and Customer Impact).

- Acquire competitors' customers
- Increase renewal rates
- Increase upsell rates
- Build a reputation for value
- Increase market penetration

- Earn customer loyalty
- Foster strong corporate identity
- Improve brand recall
- Inspire customers
- Build a reputation for creativity

DEMAND

BRAND

New Product Innovation Leadership

COMPETITIVE POSITIONING

- Stake out a unique market position
- Promise superior value to customers
- Implement strategy successfully
- Deliver on the promised value proposition
- Balance price and value

Understanding New Product Innovation

Innovation is about finding a productive outlet for creativity, for consistently translating ideas into high-quality products that have a profound impact on the customer.

Key Benchmarking Criteria

For the New Product Innovation Award, Frost & Sullivan analysts independently evaluated 2 key factors (New Product Attributes and Customer Impact) according to the criteria identified below.

New Product Attributes

    Criterion 1: Match to Needs
    Criterion 2: Reliability
    Criterion 3: Quality
    Criterion 4: Positioning
    Criterion 5: Design

Customer Impact

    Criterion 1: Price/Performance Value
    Criterion 2: Customer Purchase Experience
    Criterion 3: Customer Ownership Experience
    Criterion 4: Customer Service Experience
    Criterion 5: Brand Equity

Best Practices Award Analysis for Clariant

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows research and consulting teams to objectively analyze performance according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation. Ratings guidelines are illustrated below.

RATINGS GUIDELINES

1–3 Poor
4–6 Fair
7–8 Good
9–10 Excellent
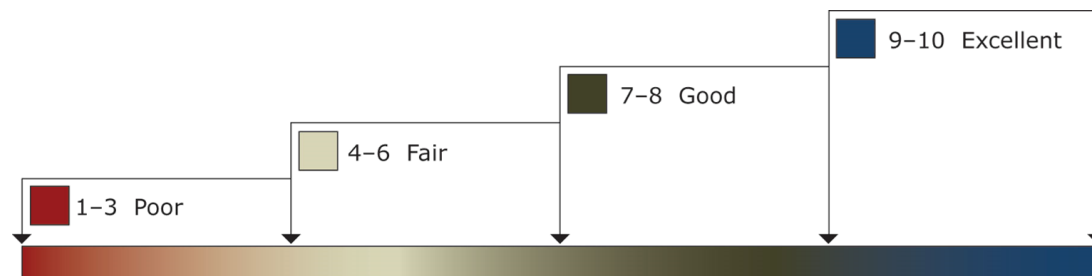
The Decision Support Scorecard considers New Product Attributes and Customer Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criterion are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, Frost & Sullivan has chosen to refer to the other key participants as Competitor 1 and Competitor 2.

Measurement of 1–10 (1 = poor; 10 = excellent)			
New Product Innovation	New Product Attributes	Customer Impact	**Average Rating**
Clariant	**9**	**9**	**9**
Competitor 1	8	8	8

New Product Attributes

Criterion 1: Match to Needs
Requirement: Customer needs directly influence and inspire the product's design and positioning.

Criterion 2: Reliability
Requirement: The product consistently meets or exceeds customer expectations for consistent performance during its entire life cycle.

Criterion 3: Quality
Requirement: Product offers best-in-class quality, with a full complement of features and functionalities.

Criterion 4: Positioning
Requirement: The product serves a unique, unmet need that competitors cannot easily replicate.

Criterion 5: Design
Requirement: The product features an innovative design, enhancing both visual appeal and ease of use.

Customer Impact

Criterion 1: Price/Performance Value
Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 2: Customer Purchase Experience
Requirement: Customers feel they are buying the optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience
Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience
Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity

Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

Decision Support Matrix

Once all companies have been evaluated according to the Decision Support Scorecard, analysts then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels
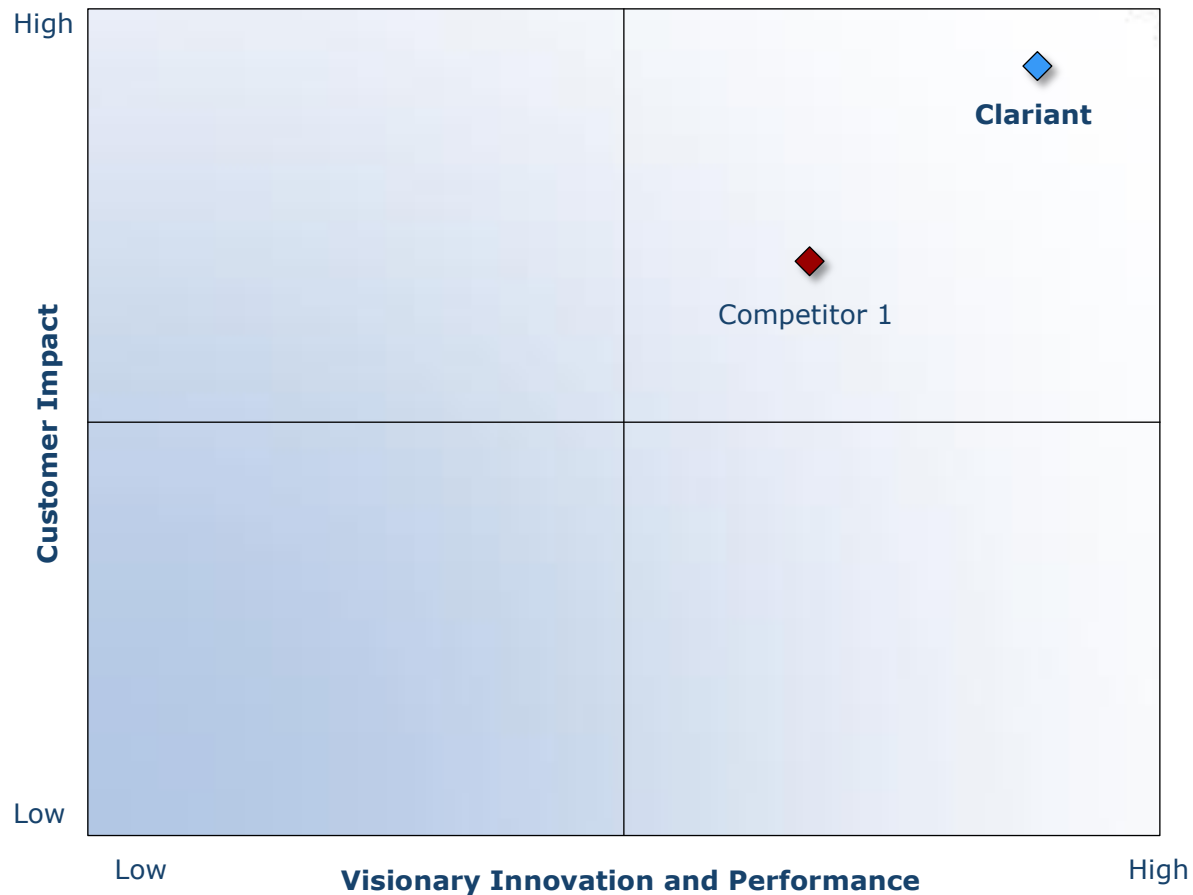
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with select best practice criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 **Monitor, target, and screen**	Identify award recipient candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2 **Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3 **Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4 **Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5 **Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized award candidates
6 **Conduct global industry review**	Build consensus on Award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible award candidates, representing success stories worldwide
7 **Perform quality check**	Develop official award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8 **Reconnect with panel of industry experts**	Finalize the selection of the best practices award recipient	• Review analysis with panel • Build consensus • Select winner	Decision on which company performs best against all best practices criteria
9 **Communicate recognition**	Inform award recipient of recognition	• Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of award and plan for how recipient can use the award to enhance the brand
10 **Take strategic action**	Upon licensing, company able to share award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit http://www.frost.com.