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CS Diagnostics Pharma GmbH  
Mr. Thomas Fahrhöfer  
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Dear Mr. Fahrhöfer,

you have asked me to evaluate the global distribution rights for MEDUSA on the basis of the future economic benefits to be achieved for the CS Diagnostics Group as of **April 1, 2025** (valuation date). I would like to comment on this as follows:

### **1. Description of the Intangible Asset: Global Distribution Rights for MEDUSA**

The intangible asset under evaluation consists of the exclusive global distribution rights for the surface disinfectant MEDUSA. These rights grant the holder the sole authorization to market and distribute the product within the target regions of North America, Europe, the Middle East, Africa, and Asia / Pacific. The exclusivity is contractually secured for the full economic life cycle of the product, which is estimated at 20 years based on potential technological advancements and the emergence of microbial resistance.

#### **a) Product Description and Areas of Application**

MEDUSA is a non-alcohol-based surface disinfectant available in various container sizes (e.g., 30 ml, 250 ml, 500 ml, 1 liter) as well as in the form of pre-moistened wipes. The product was developed by CS Interpharm LLC, a company of the CS Diagnostics Group, and is intended for the hygienic cleaning of surfaces in professional settings, particularly in:

- Hotel operations
- Food service establishments
- Public institutions such as schools, childcare facilities, sports venues, airports, and hospitals

and for use by end consumers in private households.

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According to the manufacturer, the product exhibits antibacterial, antiviral, and antifungal properties. As it does not contain alcohol, MEDUSA is not classified as a hazardous substance under applicable regulations. This may offer advantages in terms of storage, transport, and handling safety, especially for frequent use by personnel without the need for specialized protective equipment.

A notable product characteristic, as reported by the provider, is the ability to analytically detect the presence of the substance on treated surfaces up to 10 days after application. It is explicitly noted, however, that this detection does not imply any proven duration of antimicrobial efficacy or protective effect during this period.

### **b) Intellectual Property and Development Status**

MEDUSA was developed by CS Interpharm LLC. The product formulation is not protected by a patent, and according to company statements, no patent application is planned. The rationale given is that patenting would require public disclosure of the formulation. Protection of the product is therefore based on:

- Confidential knowledge (know-how) concerning its composition and manufacturing
- Regulatory approvals in selected markets (e.g., Europe and the Middle East)
- Use of the brand name “MEDUSA”

### **c) Scope of Distribution Rights**

The distribution rights under evaluation include:

- Exclusive rights to distribute all current and future variants of the MEDUSA product
- Commercial use of the existing product name
- Utilization of existing and future regulatory approvals in the defined territories
- Exclusivity against third parties within the contractually defined regions

Utilization of the rights takes place within a regulated market environment, with varying approval processes depending on the region. Regulatory authorizations are already in place for Europe and the Middle East. According to the information provided, applications for approval in North America are currently in progress, while evaluation for the African and Asian / Pacific markets is ongoing.

## 2. Market Competition

### a) Market Overview by Region

The surface disinfectant market in MEDUSA's target regions is characterized by internationally established suppliers whose products differ in terms of active ingredients, fields of application, and pricing. The main competing products by region are:

- **Europe:** Mikroqid® (Schülke & Mayr), Sagrotan® (Henkel), Domestos® (Unilever), Incidin® (Ecolab), Sterillium® Protect & Care (Hartmann Group)
- **North America:** Lysol® (Reckitt Benckiser), Oxivir® TB (Diversey), Peroxide Multi Surface Cleaner (Ecolab), Clorox® (Clorox Company)
- **Middle East / Africa:** Domestos®, Dettol® (Reckitt Benckiser), Clorox®, Oxivir®, Incidin®

Most of these products are based on **alcoholic, chlorine-based, or oxidative active substances**, such as ethanol, sodium hypochlorite, hydrogen peroxide, or quaternary ammonium compounds (QACs). These ingredients typically offer **rapid disinfection effects**, but they are generally **volatile, irritating, or classified as hazardous substances**. As a result, special handling and storage precautions are often required.

Application areas range from professional settings (e.g., hospitals, food processing, public institutions) to private use (e.g., Sagrotan, Sterillium).

## b) Price Comparison and Market Positioning

Compared to competing products, MEDUSA can be positioned as follows:

### Price Overview: Competitor Products vs. MEDUSA (in USD per unit size)

(Prices converted from EUR using an exchange rate of 1 EUR = 1.08 USD)

Region	Product (examples)	250 ml	500 ml	1 Liter
<b>Europe</b>	Domestos	1.20	2.40	4.81
	Mikrozyd	3.09	6.19	12.36
	Incidin	4.34	8.69	17.37
	Sterillium Protect & Care	11.31	22.63	45.24
	Sagrotan	19.03	38.04	76.08
<b>North America</b>	Clorox	1.85	3.69	7.38
	Lysol	6.31	12.61	25.23
	Oxivir	6.36	12.71	25.43
	Peroxide Multi Surface Cleaner	10.44	20.89	41.76
<b>Middle East / Africa</b>	Domestos	1.20	2.40	4.81
	Clorox	1.90	3.80	7.61
	Incidin	4.34	8.69	17.37
	Dettol	6.80	13.59	26.94
	Oxivir	6.36	12.71	25.43
<b>MEDUSA</b>	(Planned Sales Price)	4.49	5.99	10.99

MEDUSA is thus positioned in the **mid-price segment** - above entry-level mass-market products (e.g., Domestos, Clorox), but **significantly below premium brands** such as Sagrotan or Sterillium. In combination with relatively low production costs, this results in an **average gross margin of approximately 72 to 74 %**.

### c) Competitive Advantages of MEDUSA

In comparison to standard market products, the following distinguishing features and potential advantages of MEDUSA can be identified:

<b>Feature</b>	<b>MEDUSA</b>	<b>Competitor Products</b>
Alcohol-based	No	Mostly yes
Active ingredient type	Alcohol-free, non-oxidative	Ethanol, hypochlorite, peroxide, QACs
Hazardous material classification	Not required	Generally required
Application frequency	Potentially 1 × daily	Multiple times daily
Detectability on surface	Up to 10 days (analytical only)	Minutes
Product format	Spray & wipes	Spray/liquid; wipes less common
Target usage	Professional/commercial and private use	Mixed (B2C and B2B)

One key advantage of MEDUSA in professional settings is the **potential to reduce the frequency of application**. Since the product remains detectable on treated surfaces for up to 10 days, the number of required disinfection cycles may be significantly reduced. By contrast, conventional disinfectants typically require **multiple daily applications**, especially in high-traffic areas such as restrooms, reception zones, or communal spaces.

This results in a **substantial savings potential in terms of labor and staffing**, which are significant cost factors in professional cleaning and facility management.

### d) Market Entry Barriers

Despite its technical differentiation, various entry barriers must be considered across all target regions:

- **Regulatory hurdles:** Approval of biocidal products requires extensive documentation and testing, depending on regional requirements (e.g., EU BPR, U.S. EPA).
- **Brand loyalty:** Many institutional buyers maintain long-term supplier relationships and preferred vendor lists.
- **Established distribution and logistics structures:** Competitors benefit from mature networks, training programs, and service infrastructure.
- **Trust and credibility:** Market acceptance of new products depends on demonstrable efficacy, safety, and seamless integration into existing hygiene protocols.

MEDUSA already holds regulatory approvals in Europe and the Middle East. According to the CS Diagnostics Group, approval processes for North America are ongoing, and research is underway for entry into African and Asian / Pacific markets.

### 3. Valuation of the Distribution Rights for MEDUSA

#### a) Total Market and Target Market

The valuation of the exclusive global distribution rights for the surface disinfectant MEDUSA is based on an assessment of the underlying addressable market. Relevant in this context are the markets for professional surface disinfection in **Europe, North America, Middle East and Africa** and in **Asia / Pacific**, where MEDUSA's product concept is aligned with regulatory frameworks, market structures, and application profiles.

The available market data indicates steady growth in the coming years. The aggregate size of the target market is projected to increase from **USD 5.46 billion in 2023** to **USD 8.84 billion in 2030**, representing a compound annual growth rate (CAGR) of **7.1%**. In the same period, the global market is expected to grow to **USD 9.49 billion** (CAGR: **7.2%**). The regional development is summarized below:

Region	Market Volume 2023 (USD million)	2025 (USD million)	2030 (USD million)	CAGR 2023-2030 (%)	Target Market
Europe	1,634	1,859	2,565	6.7	yes
North America	1,968	2,238	3,089	6.7	yes
Middle East & Africa	331	380	535	7.1	yes
Asia / Pacific	1,528	1,788	2,651	8.2	yes
Remaining World	390	451	649	7.6	no
<b>Global Market Total</b>	<b>5,850</b>	<b>6,716</b>	<b>9,490</b>	<b>7.2</b>	
<b>Target Market Total</b>	<b>5,461</b>	<b>6,265</b>	<b>8,841</b>	<b>7.1</b>	

The addressable target market accounts for approximately 93% of the global market volume. The valuation is based exclusively on this portion of the market, as no market entry strategy is currently planned for the remaining regions.

#### b) Volume Effect Due to Reduced Application Frequency

One of MEDUSA's key product features is the **long-lasting surface presence of the active ingredient**, which remains analytically detectable for up to 10 days. While this does not imply a verified antimicrobial efficacy over that period, it may support a **reduction in disinfection frequency** in operational environments - especially in standardized, high-traffic commercial facilities.

Based on the target customer segmentation, the following distribution and volume impact applies:

Segment	Share of Sales	Volume Effect
Hotels	30.0%	-50.0%
Food Service	30.0%	0.0%
Other	40.0%	0.0%
<b>Weighted Average</b>		<b>-15.0%</b>

In hotel operations, a reduction in application frequency appears feasible due to standardized cleaning cycles in guest rooms. In food service and public institutions, however, disinfection is typically integrated into broader cleaning routines, meaning no significant volume effect is expected in those segments. The **overall volume effect is -15%**, which also supports MEDUSA's positioning in terms of time and cost efficiency.

### c) Pricing and Cost Structure

The economic valuation of the distribution rights is also based on MEDUSA's pricing and cost structure. The product is offered in various unit sizes and as wet wipes. MEDUSA is positioned in the **mid-price range**, while achieving an **average gross margin of 72.4%** due to its low production costs.

Unit Size	Sales Price (USD/unit)	Cost of Goods Sold (USD/unit)	Gross Margin (%)	Share of Sales (%)
250 ml	4.49	1.66	63.0	11.1
500 ml	5.99	1.80	69.9	33.3
1 Liter	10.99	2.58	76.5	33.3
30 ml	2.49	0.56	77.5	11.1
Wet Wipes	2.99	0.86	71.2	11.1
<b>Average</b>			<b>72.4</b>	

**Distribution expenses** are conservatively estimated at **35% of sales**, broken down as follows:

- 20%: Distribution partners and wholesalers
- 8%: Freight and logistics
- 7%: Sales and marketing

These assumptions reflect a typical cost structure for an internationally expanding B2B and B2C consumer product.

#### d) Discount Rate (Risk-Equivalent Interest Rate)

To determine the present value of future cash flows, a **risk-adjusted discount rate** is applied based on the Capital Asset Pricing Model (CAPM). Since the distribution right is treated as a standalone intangible asset, the cost of equity is used as the relevant rate of return:

Component	Value	Description
Risk-Free Rate	4.3%	10-year US Treasury Bonds
Market Risk Premium	5.5%	US equity market assumption
Beta Factor	1.6	Start-up / life science profile
Country Risk Premium	0.8%	Weighted average of target regions
<b>Total Discount Rate</b>	<b>13.9%</b>	Applied as WACC for cash flow valuation

This rate reflects the risk profile of an early-stage, high-margin health-related product without patent protection, but with proven differentiating product characteristics and partial regulatory approval.

#### e) Present Value of Future Cash Flows

The financial value of the distribution right is based on the **discounted future free cash flows** derived from the exclusive commercialization of MEDUSA over a 20-year horizon (2025–2045). The valuation assumes a gradual market penetration, with a market share of **0.1% in 2025** (beginning 4th Quarter of 2025), increasing linearly to **3.0% from 2030 onward**, applied to the defined target market.

Year	Sales (USD million)	COGS (USD million)	Distribution Costs (USD million)	Cash Flow (USD million)	Net present value (USD million)
2025	1	-1	-1	1	1
2026	41	-11	-14	15	12
2027	79	-22	-27	29	21
2028	122	-34	-43	45	28
2029	170	-47	-60	64	34
2030	225	-62	-79	84	40
2031–2045	5,970	-1,650	-2,089	2,230	377
<b>Total (2025–2045)</b>					<b>513</b>

The **net present value (NPV)** of the distribution rights based on expected cash flows and a discount rate of 13.9% amounts to **USD 513 million**.



#### 4. Sensitivity Analysis

The valuation of the global distribution rights for MEDUSA is based on a number of assumptions and future expectations, the realization of which cannot be predicted with certainty. Two key variables have a decisive impact on the resulting fair market value:

1. The **actual market share achieved** in the relevant geographical target markets (Europe, North America, Middle East and Africa, and Asia / Pacific)
2. The **efficiency gain for the end user**, resulting from reduced application frequency, which in turn affects the **sales volume and revenue potential**

While market share depends on factors such as regulatory approvals, distribution reach, and customer acceptance in the professional segment, the volume effect stems from the fact that certain customer groups - particularly in the hotel industry - may significantly reduce the number of daily disinfection applications. This has an impact not only on product consumption but also on revenue generation. For this reason, a sensitivity analysis is necessary to explore various combinations of these two factors.

#### Sensitivity Matrix

The table below shows the resulting net present value (in USD million) based on different scenarios for the **final target market share (0.1% to 4.0%)** and the **volume reduction (0% to -30%)**:

<b>Final Target Market Share (%)</b>	<b>0%</b>	<b>-5%</b>	<b>-10%</b>	<b>-15%</b>	<b>-20%</b>	<b>-25%</b>	<b>-30%</b>
0.10	20	19	18	17	16	15	14
0.50	101	95	90	85	80	75	70
0.75	151	143	136	128	121	113	106
1.00	201	191	181	171	161	151	141
1.50	302	286	271	256	241	226	211
2.00	402	382	362	342	322	302	281
2.50	503	477	452	427	402	377	352
3.00	603	573	543	513	482	452	422
3.50	704	668	633	598	563	528	492
4.00	804	764	724	683	643	603	563

#### Interpretation of Results

- **Base case:** The current valuation of **USD 513 million** is based on achieving a **3.0% market share** and a **weighted volume reduction of -15%**.
- A market share 0.5 percentage points lower (i.e., 2.5%) under the same volume effect would result in a valuation of **USD 427 million** (-17%).
- Conversely, if MEDUSA achieved a 4.0% market share with no volume reduction, the valuation would increase to **USD 804 million** (+57% compared to the base case).
- A stronger efficiency effect (e.g., -25%) would further reduce revenues and result in a valuation of **USD 452 million** (at 3.0% market share).

This analysis highlights the **significant sensitivity of the valuation to changes in market share and product usage efficiency**.

## **5. Conclusion on the Fair Market Value of the Distribution Rights for MEDUSA**

Based on the available market analyses, product characteristics, financial forecasts, and the discounted cash flow (DCF) valuation approach, an indicative valuation has been determined for the exclusive global distribution rights to the surface disinfectant MEDUSA.

The net present value of the projected cash flows over the economic useful life of 20 years (2025-2045), assuming a **target market share of 3.0%** from the year 2030 and a **weighted volume effect of -15 %**, amounts to **USD 513 million**. The calculation is based on a **risk-adjusted discount rate of 13.9 %**, derived using the CAPM methodology and reflecting the product- and market-specific risk profile.

The valuation is primarily influenced by the following factors:

- the actual development of market share in the defined target regions (Europe, North America, Middle East & Africa, Asia / Pacific)
- the achievable efficiency gains for end users (e.g., reduced consumption due to less frequent application)
- the pricing and margin structure across the different product variants
- the duration and stability of regulatory approvals in the respective regions

The sensitivity analysis presented in Section 4 illustrates the potential range of valuation outcomes under varying assumptions. Depending on the realized market penetration and consumption efficiency, the fair market value may range from approximately **USD 281 million** (2% market share with a 30% volume reduction) to **over USD 700 million** (3-4% market share with lower volume loss or additional growth potential).

Under the assumptions applied in this report, the **fair market value of the distribution rights is estimated at approximately USD 513 million**.

Yours sincerely,



Tom Wrangmore  
Wirtschaftsprüfer  
[certified public auditor]