

# NielsenIQ Label Insight Platform - Product Specifications

## Executive Summary

The NielsenIQ Label Insight Platform for Albertsons Companies is a comprehensive product data intelligence platform that integrates NielsenIQ's Label Insight data with Albertsons' product catalog to provide enhanced product discovery, improved customer experience, and data-driven insights.

## Product Overview

### Primary Objectives

- **Enhanced Product Discovery:** Improve customer search and filtering capabilities with enriched product attributes
- **Data Intelligence:** Provide comprehensive analytics on product attributes, coverage, and quality
- **Migration Management:** Track and manage the integration of NielsenIQ Label Insight data
- **Store Brand Optimization:** Analyze and optimize Albertsons' private label products

### Target Users

- **Data Analysts:** Product data analysis and reporting
- **Category Managers:** Product portfolio optimization
- **IT Teams:** Data migration and system integration
- **Business Intelligence:** Strategic decision making

## Core Features

### 1. Dashboard Module

**Purpose:** Executive overview of product data intelligence

#### Key Metrics:

- **SKU Coverage:** 96.8% (Percentage of products with complete NielsenIQ data)
- **Data Freshness:** 16 hours average (Time since last update)
- **Enriched Attributes:** 27 avg/SKU (Verified attributes per product)
- **Migration Progress:** 94.7% (Overall integration completion)
- **Store Brands:** 13 integrated brands
- **Search Performance:** 22.4% improvement in customer success rate

## **Store Brand Performance Insights:**

- O Organics: 89% with clean label attributes
- Culinary Circle: 156 premium products identified
- Stockman & Dakota: 94% with premium certifications

## **2. Product Catalog Module**

**Purpose:** Search, filter, and manage product database

### **Capabilities:**

- **Advanced Search:** Name, brand, category, attribute-based search
- **Multi-level Filtering:** Category, brand, attribute combinations
- **Product Cards:** Detailed product information display
- **Expandable Details:** Nutrition, claims, certifications, allergens
- **Coverage Indicators:**
  - Green (95%+): Excellent data completeness
  - Yellow (90-94%): Good with some gaps
  - Red (<90%): Significant data missing

### **Import/Export Functions:**

- **JSON Export:** Complete data structure preservation
- **CSV Export:** Simplified spreadsheet format
- **Template Downloads:** JSON and CSV import templates
- **Bulk Import:** File-based product data upload

## **3. Data Migration Module**

**Purpose:** Track NielsenIQ Label Insight data integration

### **Migration Categories:**

- Store Brands Integration: 100% complete (13 brands)
- Organic Claims Verification: 96% complete (15,847 products)
- Nutritional Data Mapping: 98% complete (847,293 products)
- Allergen Information: 94% complete (534,289 products)
- Certification Validation: 89% complete (67,834 products)

- Attribute Enrichment: 92% complete (847,293 products)

#### **Tracking Features:**

- Real-time progress monitoring
- Category-specific completion status
- Activity timeline with detailed logs
- Status indicators (Complete, In Progress, Pending)

### **4. Attribute Analytics Module**

**Purpose:** Analyze product attribute distribution and quality

#### **Attribute Categories:**

- **Store Brand Attributes:** 847 products (76% coverage)
- **Organic & Clean Label:** 1,205 products (89% coverage)
- **Allergen Information:** 534 products (94% coverage)
- **Nutritional Claims:** 892 products (82% coverage)
- **Dietary Preferences:** 678 products (67% coverage)
- **Premium & Artisan:** 234 products (45% coverage)

#### **Quality Metrics:**

- **Completeness:** 94% (Products with full attribute data)
- **Accuracy:** 98% (Verified information percentage)
- **Freshness:** 91% (Recency of attribute updates)
- **Consistency:** 96% (Standardized formatting)

### **5. AI Assistant**

**Purpose:** Intelligent help and guidance system

#### **Capabilities:**

- Natural language Q&A interface
- Feature explanations and guidance
- Contextual help responses
- Integration tutorials and tips

#### **Knowledge Areas:**

- Product coverage interpretation
- Attribute category explanations
- Search and filtering techniques
- Export functionality guidance
- Migration status interpretation

## 6. Help System

**Purpose:** Comprehensive user assistance

**Components:**

- **Contextual Tooltips:** Hover-based quick help
- **Information Icons:** Section-specific guidance
- **Modal Help:** Detailed feature documentation
- **Progressive Disclosure:** Basic tips to advanced guidance

## Technical Specifications

### Frontend Architecture

- **Framework:** React 18+ with functional components
- **Styling:** Inline styles with responsive design principles
- **Icons:** Lucide React icon library
- **State Management:** React hooks (useState, useEffect)
- **Performance:** Optimized rendering with conditional displays

### Data Models

#### Product Data Structure

```
json
```

```
{
  "id": "UPC123456789",
  "name": "Product Name",
  "brand": "Brand Name",
  "category": "Category",
  "subCategory": "SubCategory",
  "price": 4.99,
  "size": "16 oz",
  "coverage": 98,
  "lastUpdated": "2025-01-22",
  "claims": ["Claim1", "Claim2"],
  "certifications": ["Cert1", "Cert2"],
  "nutrition": {
    "calories": 110,
    "protein": 3,
    "fiber": 4,
    "sugar": 6,
    "sodium": 190,
    "fat": 2,
    "carbs": 22
  },
  "fullAttributes": {
    "Dietary & Lifestyle": {
      "Organic": true,
      "Non-GMO": true,
      "Gluten Free": false,
      "Vegan": true,
      "Vegetarian": true,
      "Keto Friendly": false,
      "Paleo": false,
      "Low Carb": false,
      "Kosher": true,
      "Halal": false
    },
    "Health & Nutrition": {
      "Low Sodium": false,
      "High Fiber": true,
      "Whole Grain": true,
      "Low Sugar": false,
      "High Protein": false,
      "Low Fat": true,
      "Low Calorie": false,
      "Heart Healthy": true,

```

```
    "Fortified": true,  
    "Probiotic": false  
  },  
  "Clean Label": {  
    "No Artificial Colors": true,  
    "No Artificial Flavors": false,  
    "No Artificial Preservatives": true,  
    "No High Fructose Corn Syrup": true,  
    "No Trans Fat": true,  
    "No MSG": true,  
    "Natural": true,  
    "Minimally Processed": true,  
    "Simple Ingredients": true,  
    "Clean Label": true  
  },  
  "Sourcing & Production": {  
    "Sustainable": true,  
    "Fair Trade": false,  
    "Local": false,  
    "Small Batch": false,  
    "Artisan": false,  
    "Traditional": false,  
    "Premium": true,  
    "Family Farm": true,  
    "Hand Crafted": false,  
    "Quality Assured": true  
  }  
},  
"allergens": ["Allergen1", "Allergen2"],  
"tags": ["tag1", "tag2"],  
"migrationStatus": "Complete",  
"dataQuality": 98  
}
```

## API Specifications

### Product Search Endpoint

GET /api/products/search

Parameters:

- q: Search query string
- category: Product category filter
- brand: Brand filter
- attributes: Attribute filters (comma-separated)
- limit: Results per page (default: 50)
- offset: Pagination offset

Response:

```
{
  "products": [...],
  "total": 1234,
  "page": 1,
  "totalPages": 25
}
```

## Export Endpoints

GET /api/products/export/json

GET /api/products/export/csv

Parameters:

- filters: Applied search/filter criteria
- format: Export format specification

## Performance Requirements

- **Page Load Time:** < 2 seconds initial load
- **Search Response Time:** < 500ms for filtered results
- **Export Generation:** < 30 seconds for full catalog
- **Concurrent Users:** Support 100+ simultaneous users
- **Data Refresh:** Real-time updates with 15-minute batch processing

## Security & Compliance

- **Authentication:** Role-based access control
- **Data Privacy:** GDPR and CCPA compliant
- **Audit Logging:** Complete user action tracking
- **Data Encryption:** In-transit and at-rest encryption

# Business Value

## Customer Experience Improvements

- **Enhanced Search:** 22.4% improvement in search success rate
- **Better Discovery:** Rich attribute-based filtering
- **Informed Decisions:** Comprehensive product information

## Operational Efficiency

- **Data Quality:** 94.7% overall data completeness
- **Process Automation:** Automated attribute enrichment
- **Reduced Manual Work:** Self-service analytics and exports

## Strategic Insights

- **Store Brand Performance:** Detailed private label analytics
- **Market Positioning:** Competitive attribute analysis
- **Customer Preferences:** Trending attribute identification

## Implementation Timeline

### Phase 1: Core Platform (Weeks 1-4)

- Dashboard and navigation framework
- Basic product catalog functionality
- Data migration tracking

### Phase 2: Advanced Features (Weeks 5-8)

- Search and filtering optimization
- Import/export capabilities
- Attribute analytics

### Phase 3: Intelligence Layer (Weeks 9-12)

- AI assistant integration
- Advanced help system
- Performance optimization

### Phase 4: Production Deployment (Weeks 13-16)



- User acceptance testing
- Performance tuning
- Go-live preparation

## **Success Metrics**

### **Technical KPIs**

- System uptime: 99.9%
- Response time: < 500ms average
- Data accuracy: 98%+
- User adoption: 80% of target users

### **Business KPIs**

- Search success rate improvement: 20%+
- Time to insight reduction: 50%
- Data completeness: 95%+
- User satisfaction: 4.5/5 stars

## **Future Enhancements**

### **Advanced Analytics**

- Machine learning-powered product recommendations
- Predictive analytics for trend identification
- Customer behavior analysis integration

### **Extended Integrations**

- E-commerce platform connectivity
- Supply chain management integration
- Marketing automation platform links

### **Enhanced Intelligence**

- Natural language query processing
  - Automated insight generation
  - Real-time competitive analysis
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**Document Version:** 1.0

**Last Updated:** January 22, 2025

**Classification:** Internal Use

**Owner:** NielsenIQ Label Insight Team