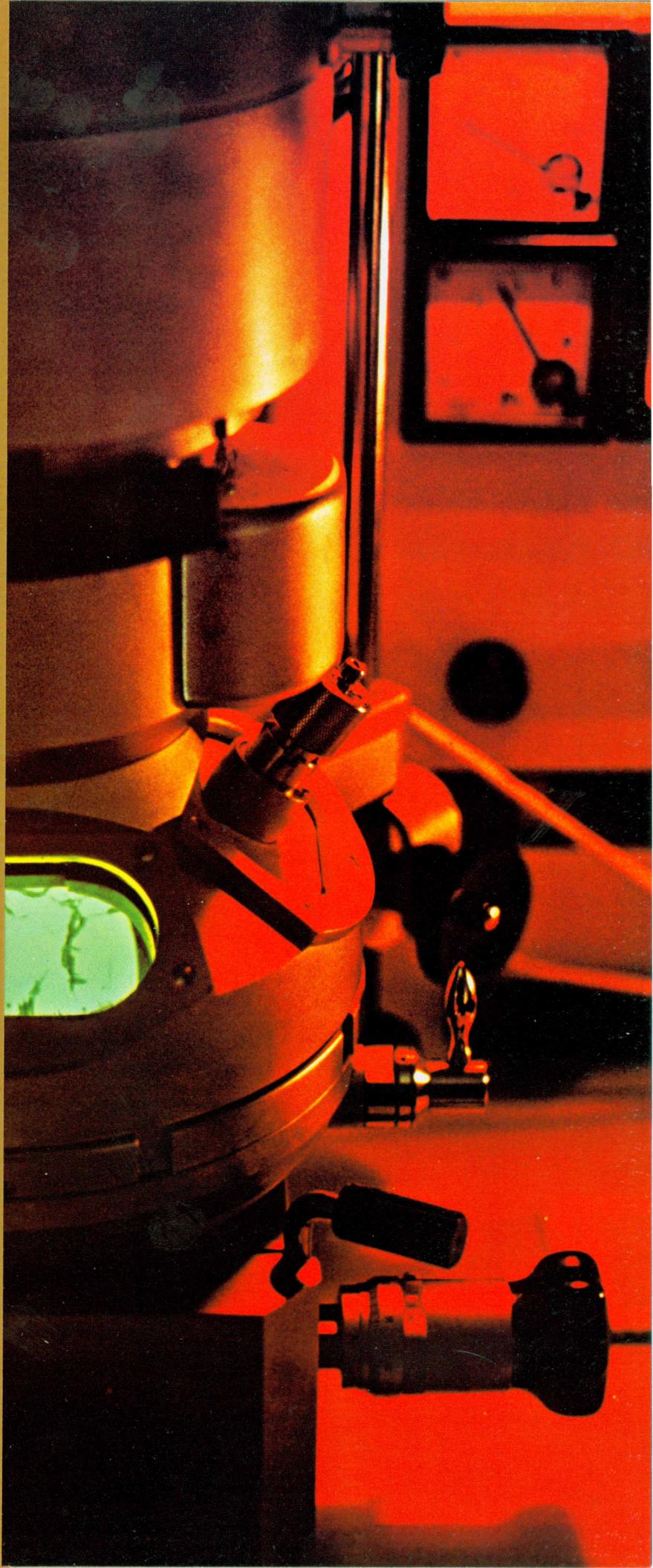


MARK VI  
MEMOREX

Partial Scan

The Memorex Mark VI Disc Pack is an advanced product based on the same philosophy of technical excellence that produced the Mark I Disc Pack, as well as a family of precision magnetic tapes and disc drives.

With this tradition of quality behind it, it's not surprising that the Mark VI is the technically superior 20-surface disc pack.

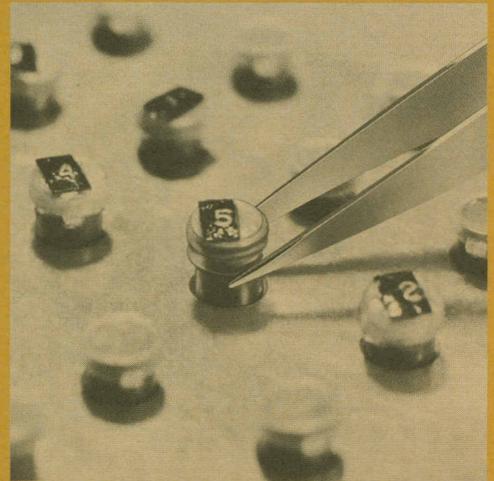


The story of the Mark VI is the story of extra care—of performing each operation as well as it can be done.

This extra care starts where the product starts—with research and development. And a measure of the emphasis is in the resources that we devote to research and development.

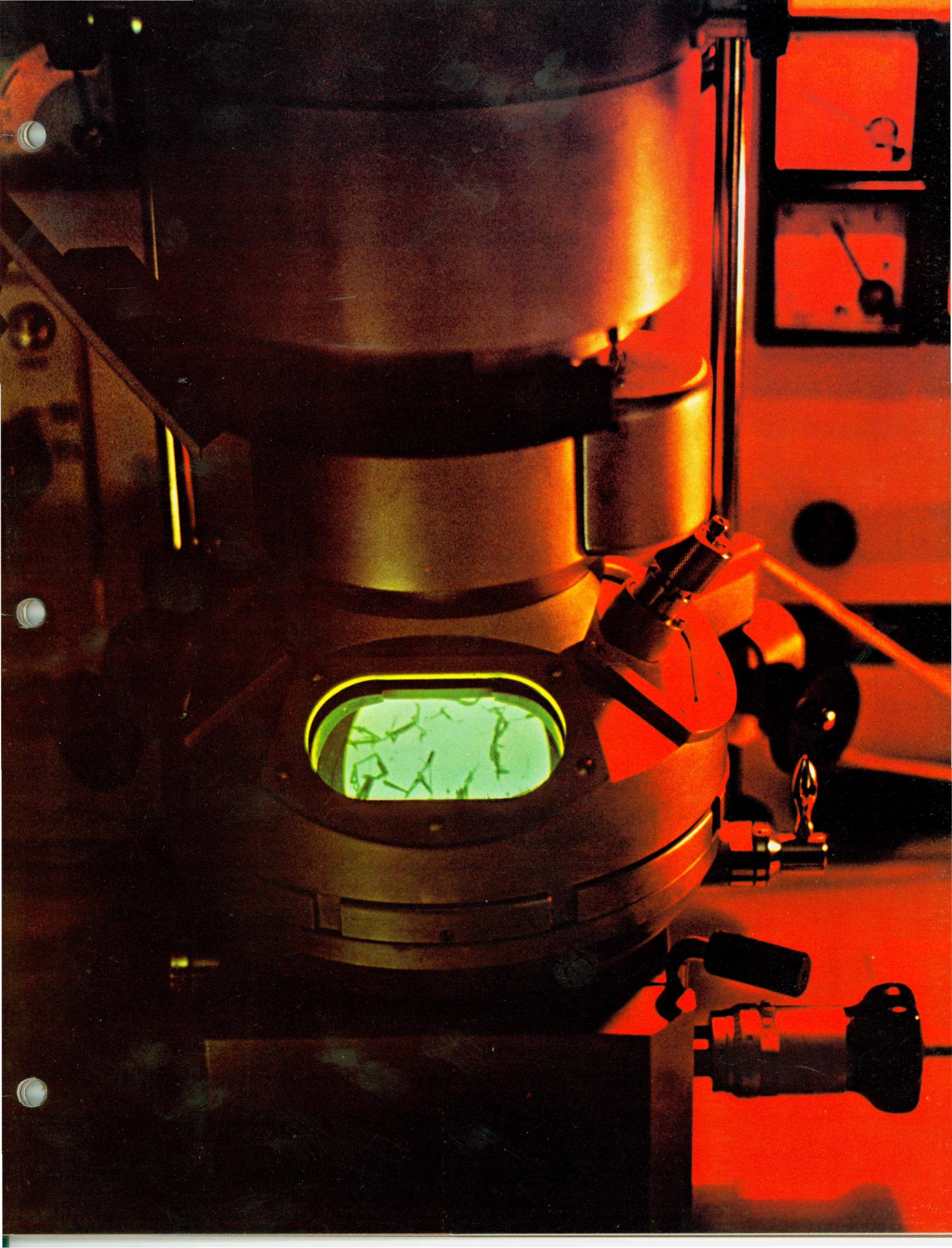
The Memorex laboratories are among the best equipped in the world. Equipment ranges from such items as mass spectrometers to the kind of equipment usually found only in research institutions—powerful analytical tools like an electron microscope capable of analyzing the structure of a coating formulation in minute detail.

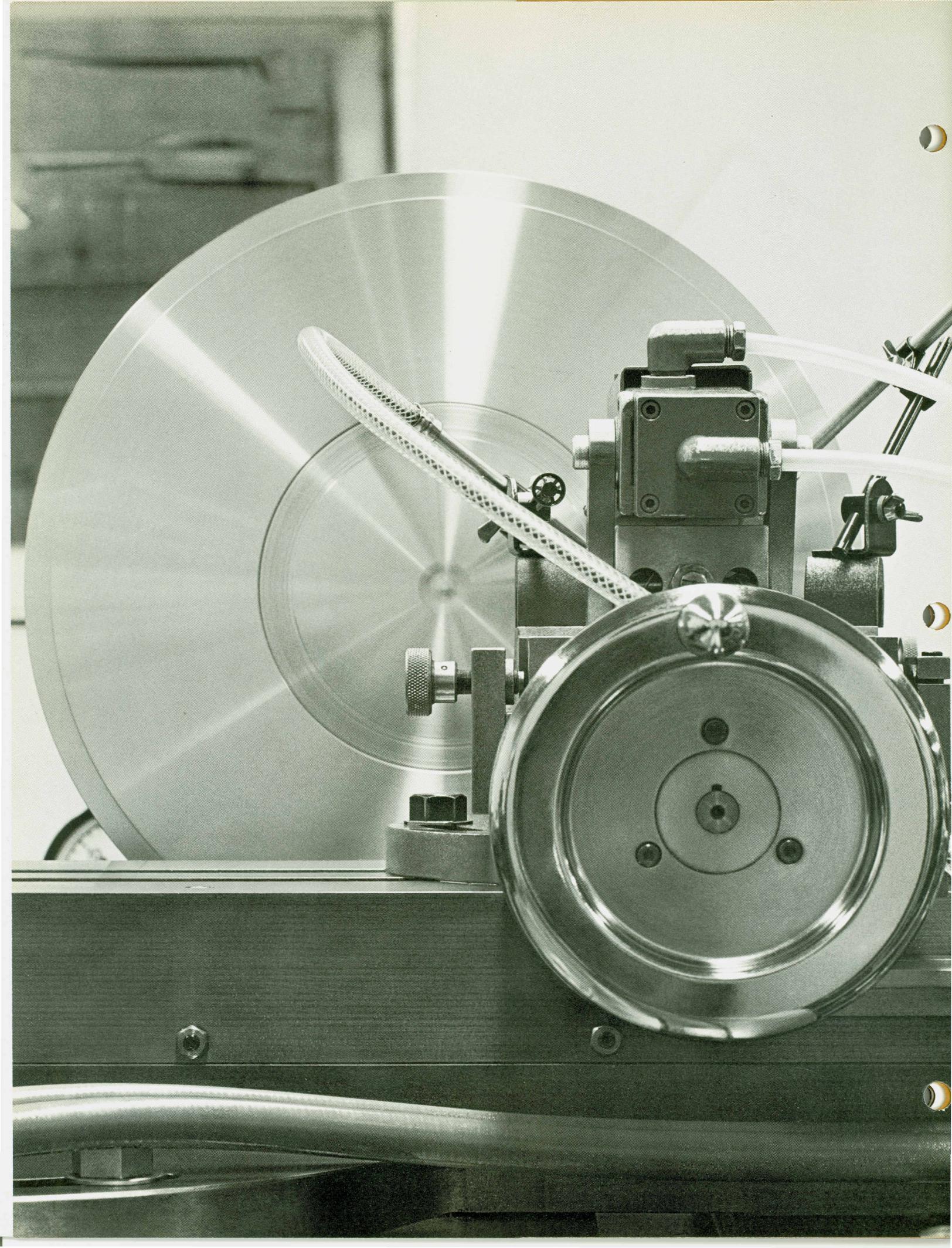
Research is a way of life at Memorex. Because we feel that no matter how good a product is, it can always be improved. And the next one must be even better.



*Samples of experimental coating formulations are tested in a magnetometer.*

*With the electron microscope, scientists study the structure of magnetic coatings at magnifications up to 1,600,000 times.*



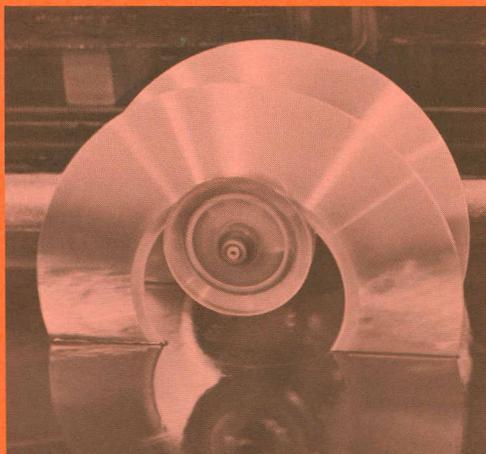


Like any other product, a disc pack starts as a collection of its component parts. Unlike other products, a Memorex disc pack contains no off-the-shelf parts. Many are manufactured by Memorex, or they are built by specially selected suppliers working to exacting Memorex specifications. Special tooling used by the vendors is supplied by Memorex.

In all cases, our quality control engineers carefully examine and test each shipment before it leaves the vendor's plant. And this is only the first in a long series of tests for each component.

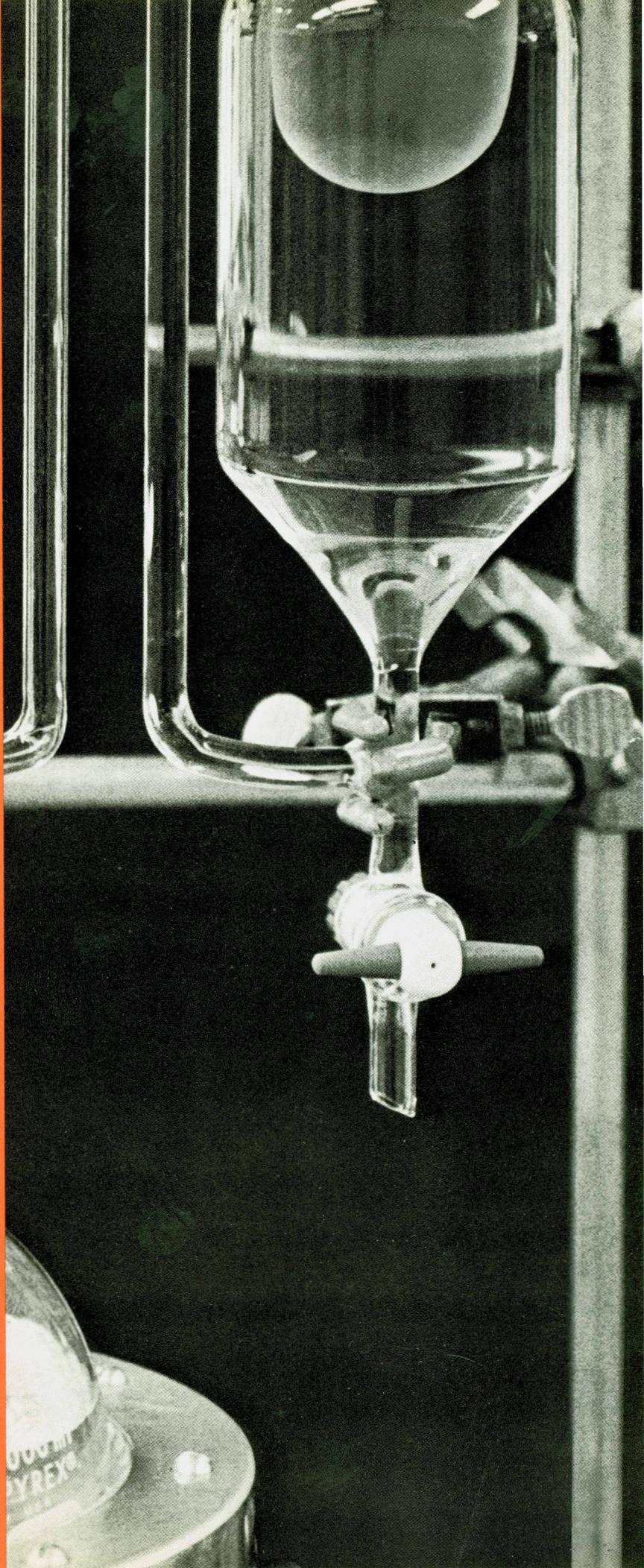
For example, the aluminum for the disc substrates is finished to rigid specifications by the vendor. But at the Memorex plant it goes through a series of special annealing, flattening, and finishing processes to assure strength, rigidity, and a surface finish comparable to optical glass. And finally, a series of chemical cleaning baths finish the preparation of the substrates for coating.

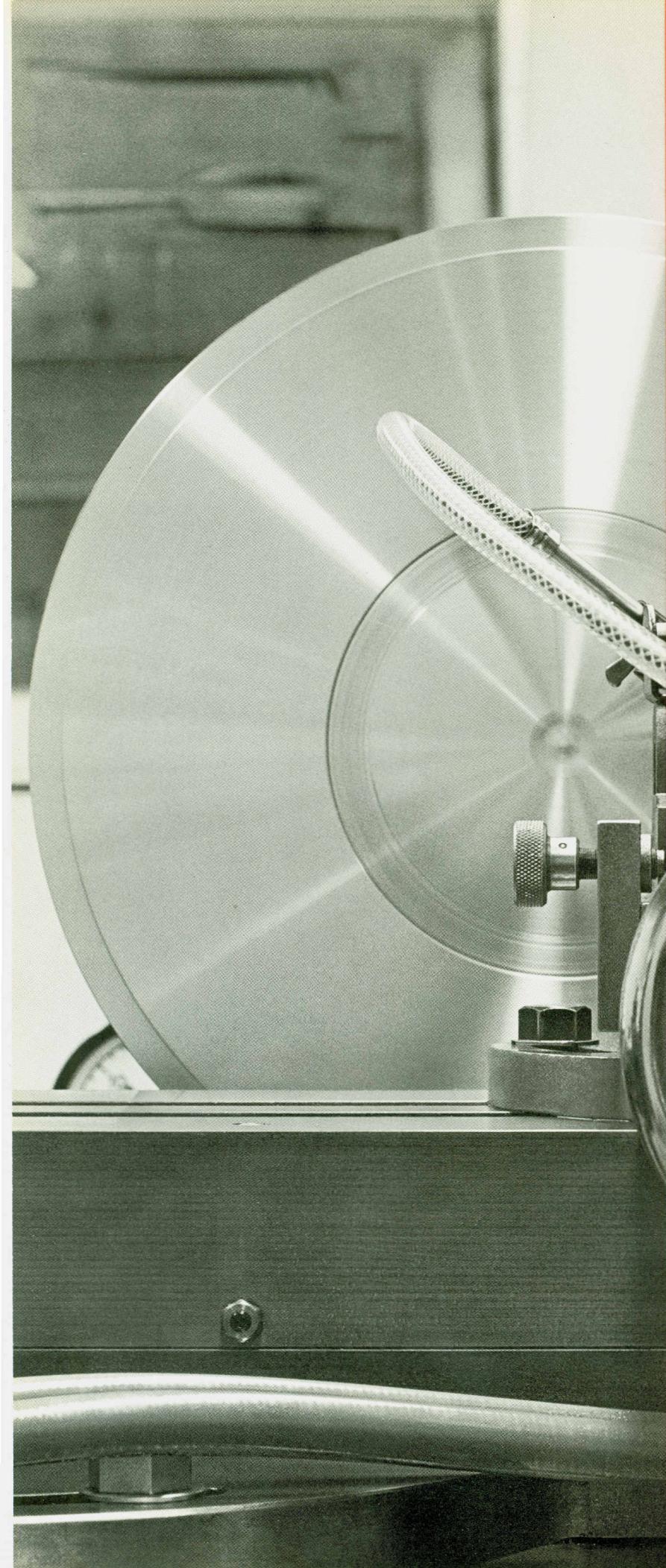
Each substrate is subjected to nine quality control checks before it is ready for coating. Failure to pass any one of these checks results in immediate rejection of the substrate.



*Chemical baths complete the preparation of substrates for coating.*

*Precision polishing is one step in making disc substrates from specially formed aluminum blanks.*

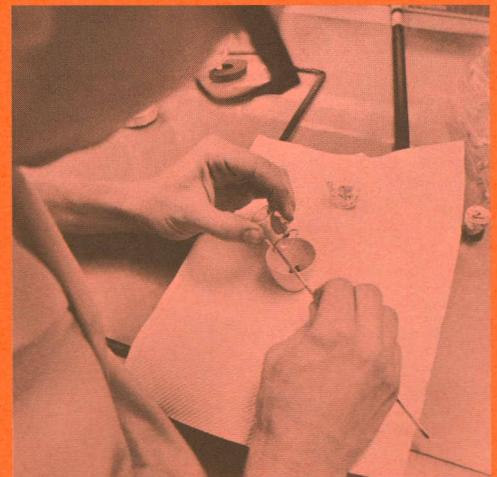




The "secret" ingredients in Memorex disc packs are uncommon care and extra precision. Together they produce results like the unique, Memorex-developed coating formulation and process. The extra care extends to the coating ingredients, which are checked as thoroughly as the mechanical components of the disc pack. For example, no chemicals are accepted until Memorex chemists have taken samples and run complete acceptability analyses.

The coating mix is critical. It requires precise quantities of oxide to be mixed, under rigidly controlled conditions, with the various ingredients that make up the organic resin binder. Seven quality-control checks are performed during the mixing process alone.

The payoff is in the coating on the finished disc. With an ordinary coating, contaminants that get between the disc and the head during operation may cause enough friction to fuse a portion of the coating. This can cause a catastrophic failure. But the unique physical properties of the Memorex coating prevent such fusing, allowing the normal flow of air to clear contaminants before any serious damage occurs.



*Analytical chemists test samples of each ingredient before the coating is mixed.*

*Memorex's emphasis on chemical research has resulted in superior binders and magnetic coatings.*



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## TECHNICAL SUMMARY

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### Configuration

Number of data discs  
11  
Number of recording surfaces  
20  
Number of recording tracks  
4060, including alternates

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### Storage capacity

29.17-million eight-bit bytes

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### Oxide magnetic properties

Coercive force  
300 oersteds  
Maximum saturation  
3350 gauss  
Residual saturation  
1950 gauss

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Disc substrate Special memory-disc  
aluminum alloy

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### Disc coating

Formulation Proprietary coating,  
especially formulated for  
magnetic uniformity and  
resistance to wear  
Thickness 100 microinches  
Finish Smooth to within  
2 microinches  
(arithmetic average)

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### Pack mechanics

Disc vertical runout  
12 mils, maximum  
Rate of change of runout  
Less than 1 mil per inch  
Balance Dynamically balanced to  
within 4 inch-grams in  
each of two planes  
Sector disc  
Includes timing slot for  
compatibility with 2314  
and 660 type drives

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### Cover set

Material Lexan top and bottom covers  
for maximum resistance  
to breakage and fire  
Dimensions  
Less than 5¾ inches high  
by 15 inches in diameter

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Pack weight Less than 14 pounds

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Shipping weight  
19 pounds

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# MEMOREX

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