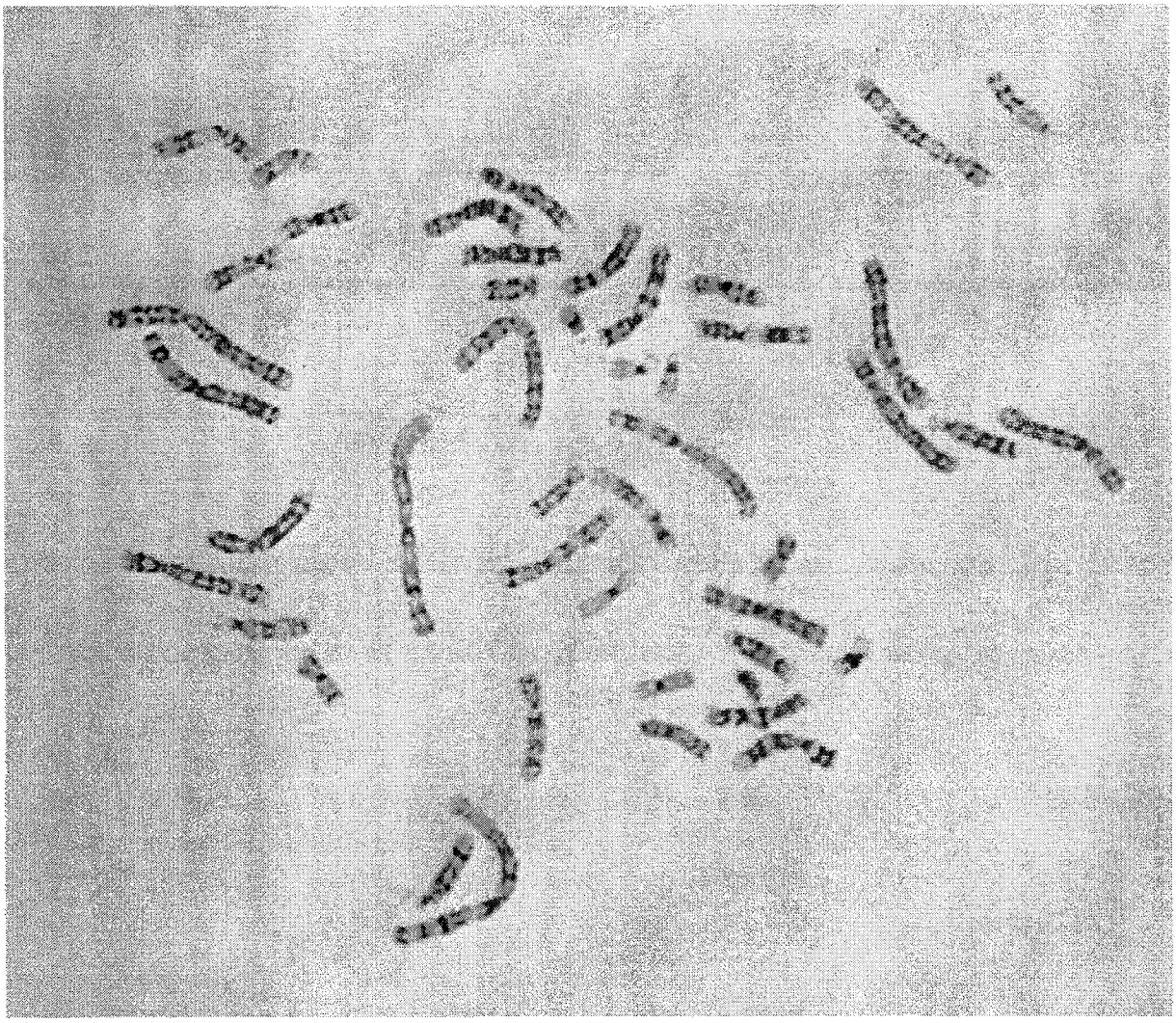
Catalogue Number: 33W1046

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 1



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

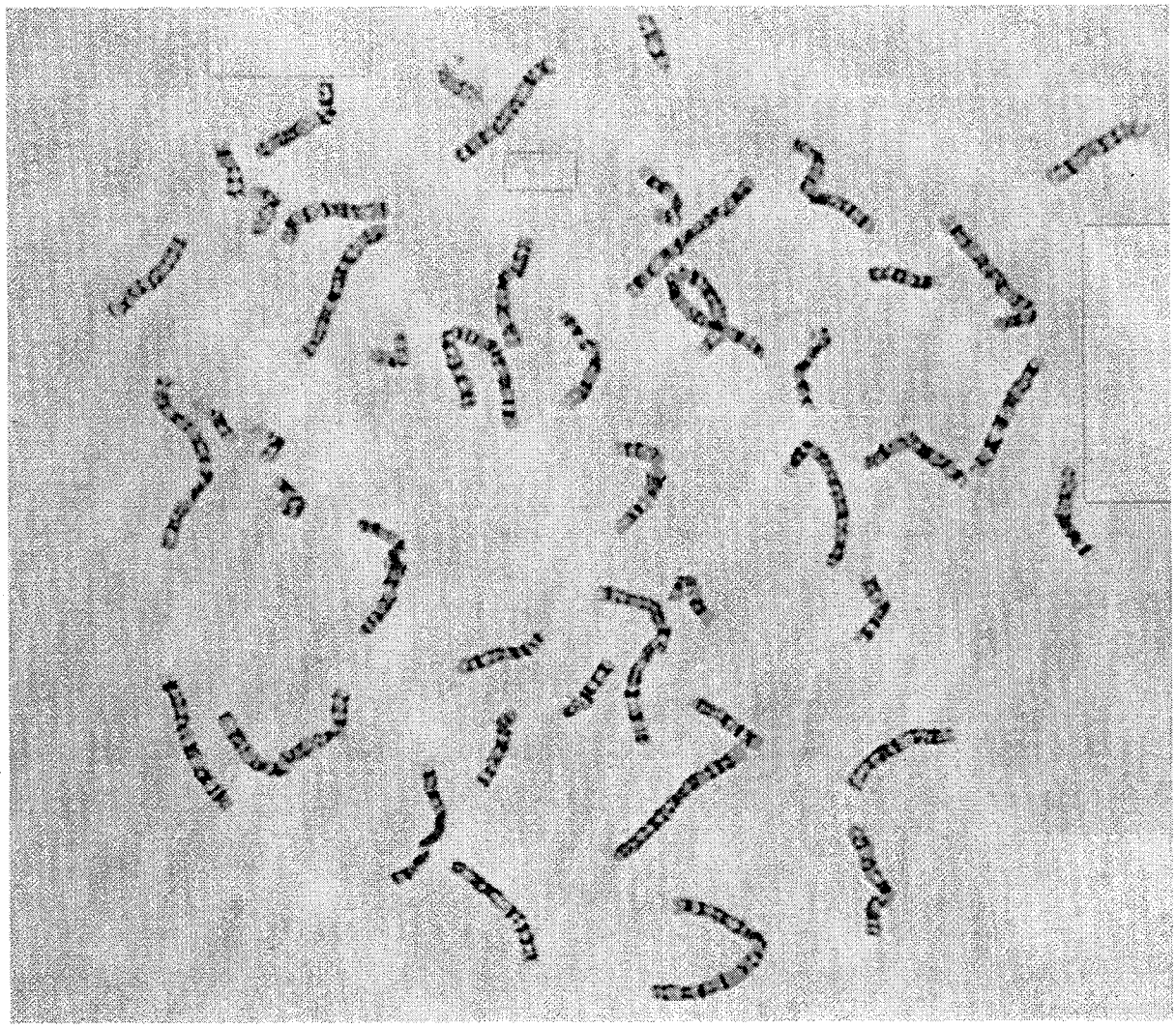
1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

Catalogue Number: 33W1047

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 2



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

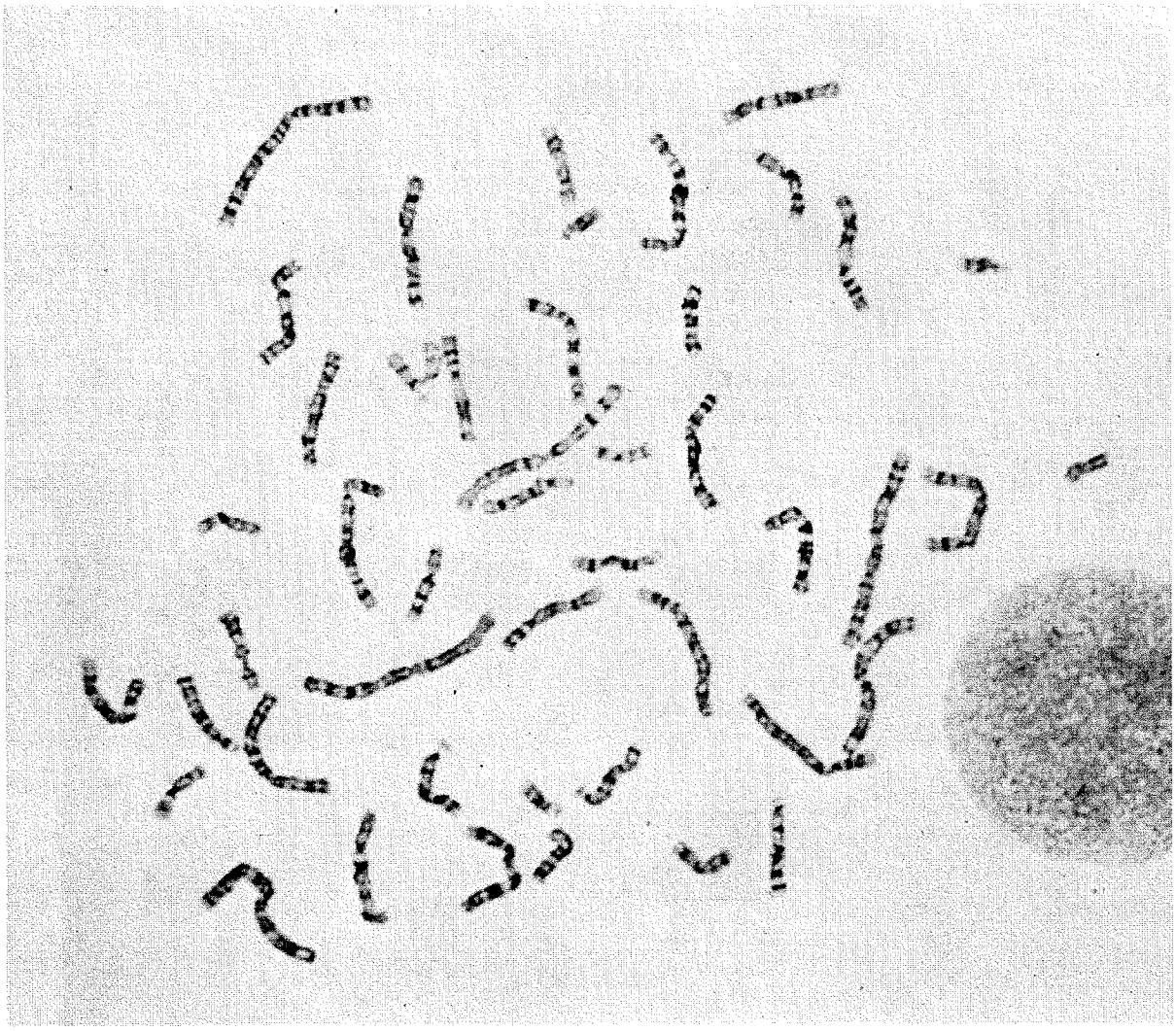
1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

Catalogue Number: 33W1048

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 3



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

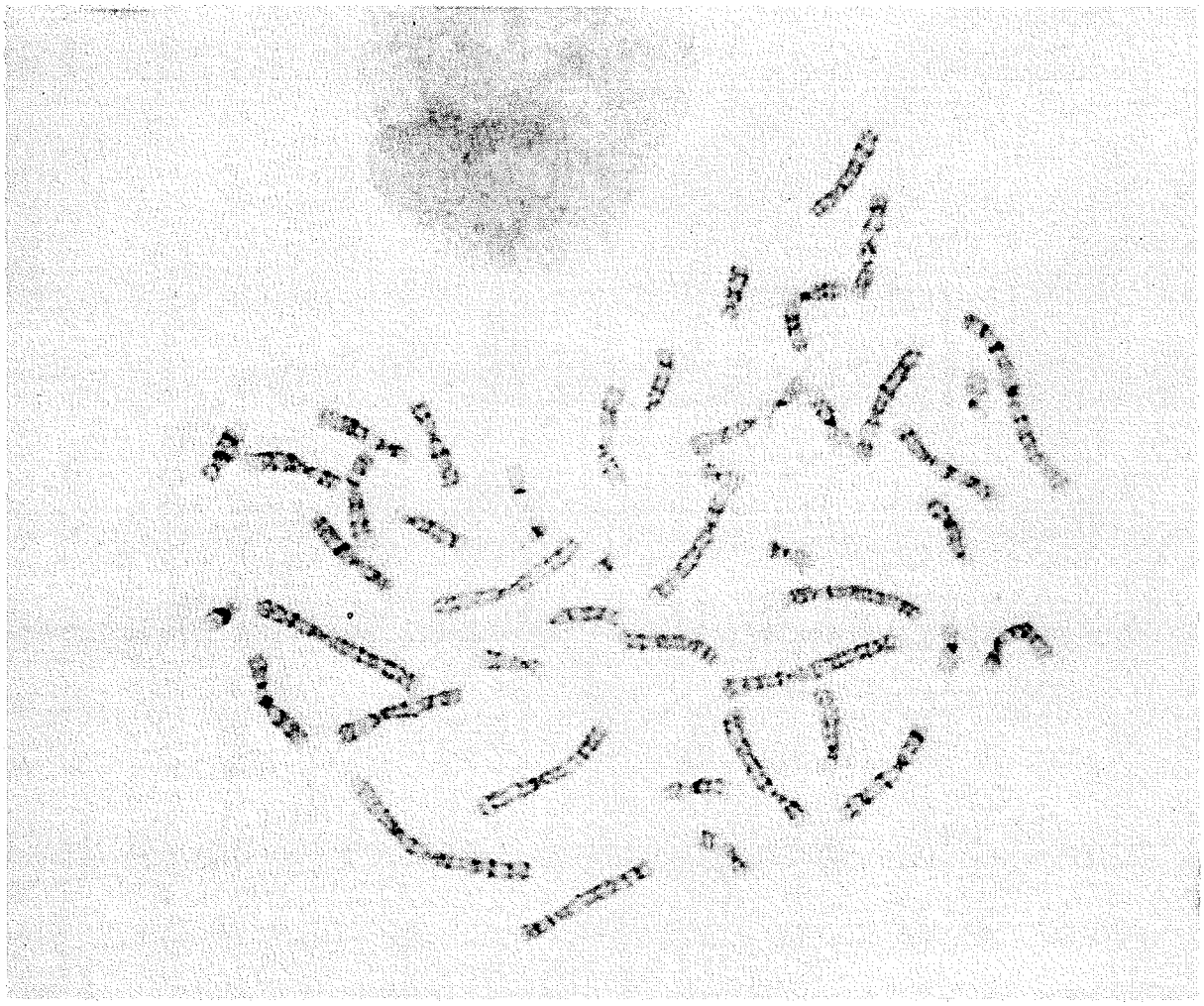
1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

Catalogue Number: 33W1049

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 4



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

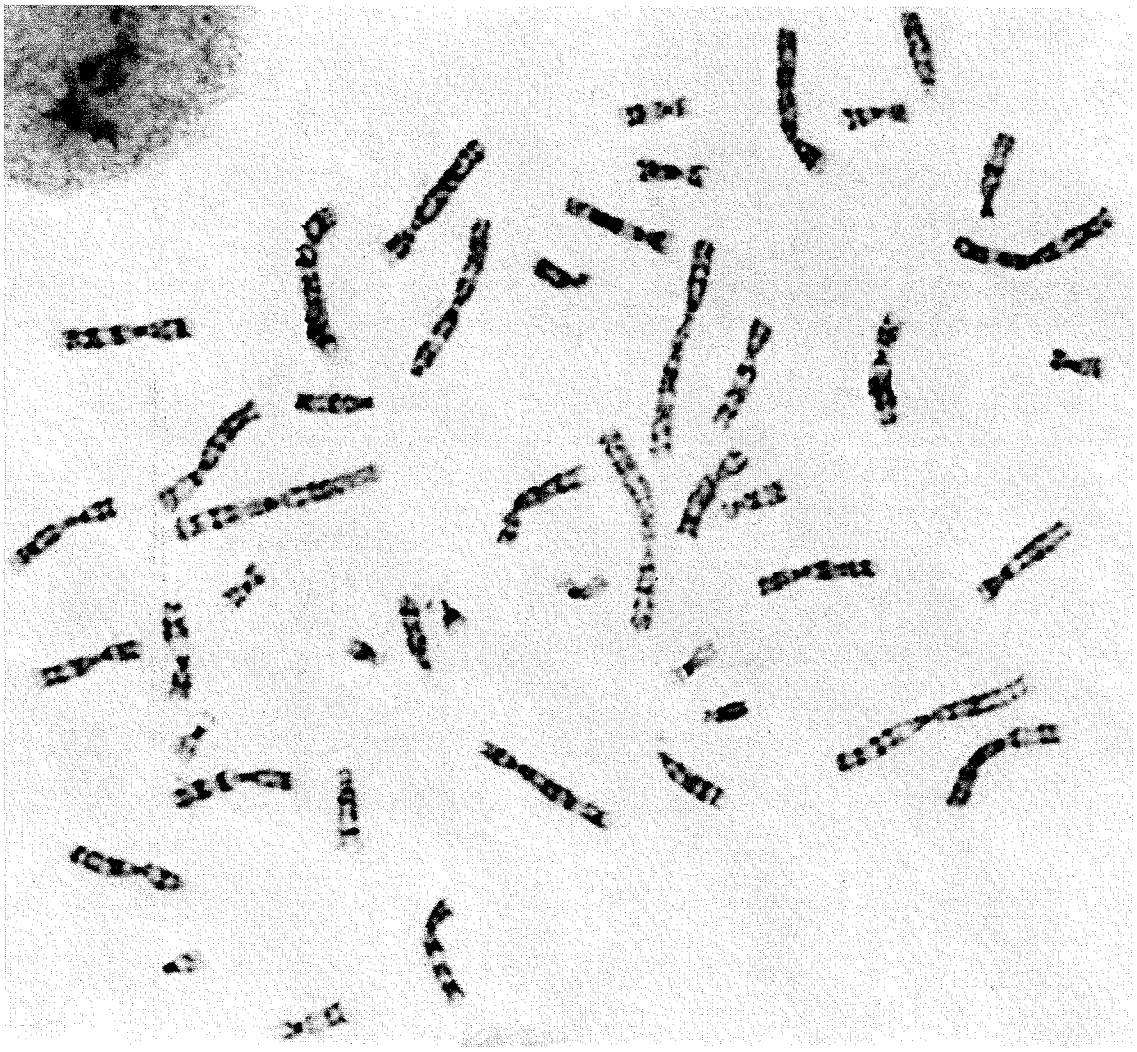
WARD'S

Catalogue Number: 33W1050

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 5



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

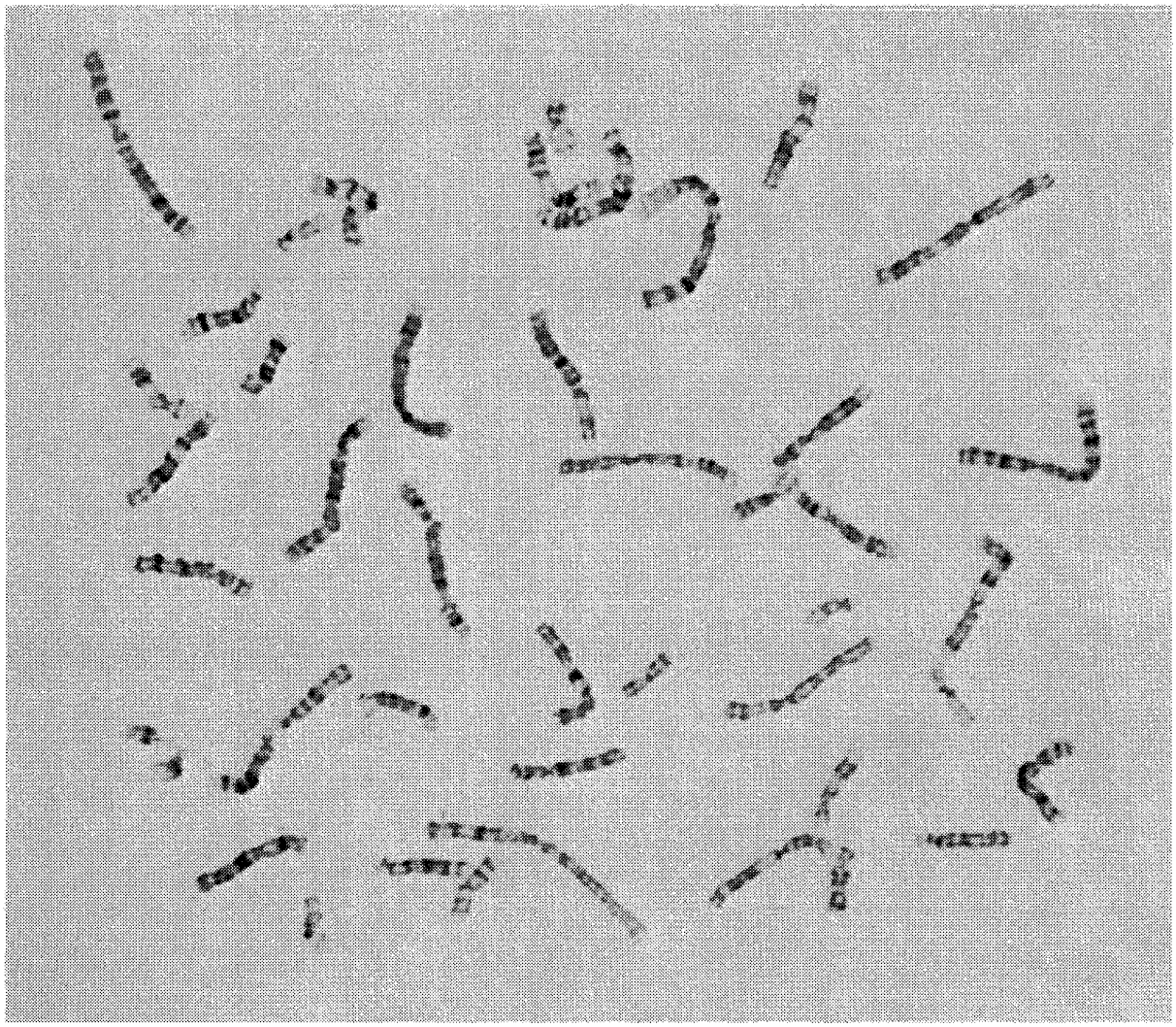
WARD'S

Catalogue Number: 33W1051

HUMAN CHROMOSOME SPREAD

The photomicrograph below is an enlarged picture of stained chromosomes in a single human cell treated with colchicine to arrest mitosis during metaphase. Cellular debris and organelles, such as the nucleolus, often appear in these photographs.

Spread 6



STUDENT INSTRUCTIONS FOR KARYOTYPING THIS SPREAD

1. Read the instructions carefully before beginning.
2. Using scissors, carefully cut out each chromosome.
3. Using a blank karyotype form, place each cutout chromosome onto the appropriate space on the blank form. Identifying the exact space for each chromosome is difficult at first. Note that the chromosomes are always arranged on the form in declining order of length with the exception of the X and Y chromosomes. The position of the centromere and the darkly stained bands also help identify each chromosome. There are two matching chromosomes at each numbered position in a normal individual. Chromosomes are frequently bent; this is not unusual or abnormal.
4. Once all the chromosomes have been classified on the karyotype form, tape or glue them in place.
5. At the bottom of the form, identify the number of chromosome and the sex if possible (XX = female, XY =male).
6. Is there any abnormality present? e.g. too many chromosomes, too few, parts missing, extra pieces stuck on one chromosome.
7. OPTIONAL: If a disorder is present, find out its name, symptoms, treatment if any, cause of the abnormalities, and whether or not this individual's offspring could inherit this disorder.

WARD'S